



**DATA VALIDATION
MOAB SITE
MOAB, UTAH**

**December 2001
Water Sampling**

Prepared by the
**U.S. Department of Energy
Grand Junction Office**



MOAB, UTAH
December 2001

DATA PACKAGE CONTENTS

This data package includes the following information:

Item No. Description of Contents

1. **Site Hydrologist Summary**

2. **Data Package Assessment**, which includes the following:

- a. Field procedures verification checklist
- b. Confirmation that chain-of-custody was maintained.
- c. Confirmation that holding time requirements were met.
- d. Evaluation of the adequacy of the QC sample results.

3. **Data Assessment Summary**, which describes problems identified in the data validation process and summarizes the validator's findings.

4. **UMTRA Database Printouts**

- a. Ground-Water Quality Data
- b. Surface-Water Quality Data
- c. Equipment Blank/Trip Blank Data
- d. Water Level Data

 Static Ground Water Levels

 Ground Water Surface Elevation Contour Map

5. **Sampling and Analysis Work Order and Trip Report.**

The plate is not available in electronic format.
Please email moabcomments@gjo.doe.gov to request plate.

Site Hydrologist Summary

Site: Moab, Utah

Sampling Period: December 3 to December 6, 2001

SUMMARY CRITERIA

- 1. Did concentrations in water from any domestic wells sampled exceed a ground water standard, primary drinking water standard, or health advisory?**

Domestic wells were not sampled during this event.

- 2. Were standards exceeded at any point-of-compliance wells?**

There are no point-of-compliance wells established at the Moab site.

- 3. As a result of this sampling round, is there any indication of unexpected contaminated ground water movement?**

DOE is currently in the process of assessing baseline conditions at the Moab site. This sampling event was the first conducted by DOE; therefore, historical data is not readily available to determine if there was unexpected contaminated ground water movement. DOE is currently reviewing and formatting historical data provided by Sheppard-Miller Inc. in order to incorporate the data into the Site Environmental Evaluation database. Contaminant plume movement, therefore, will be addressed in the next data validation package. Wells with sample concentrations that exceeded UMTRA ground water standards are listed in Table 1.

A surface contour map of ground water elevations for the alluvial flow system is attached. The network of wells used to construct ground water surface contour map is provisional and will evolve as DOE continues to assess the usefulness of historical wells and as new wells are added to the network.

Site Hydrologist Summary (continued)

4. Is there statistical evidence that UMTRA Project related contaminants were detected in a surface water body in greater concentrations than upstream ambient water quality?

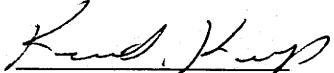
As with ground water, a more complete assessment of impacts to surface water will be addressed in the next data validation package when historical data is available for use. However, examination of the results from this sampling event indicate that all samples collected from the Colorado River adjacent to and downstream of the site have ammonium and uranium concentrations greater than the concentration reported for the upstream location (CR-1).

Table 1. Moab Wells with Samples that Exceeded UMTRA Standards in December 2001.

ANALYTE	STANDARD ¹	WELLS EXCEEDING STANDARDS (CONCENTRATION ¹)
Molybdenum	0.100	AMM-2 (1.07), AMM-3 (0.873), ATP-2-S (0.741), MW-3 (1.12), TP-02 (0.552), TP-07 (0.268), TP-08 (0.866), TP-09 (0.828)
Net Alpha ²	15 (pCi/L)	TP-02 (5344.9)
Nitrate	44.27	AMM-2 (213), MW-3 (271), TP-09 (413)
Selenium	0.010	AMM-1 (0.0133), AMM-2 (0.01), TP-01 (0.0129), TP-09 (0.0479)
Uranium	0.044	AMM-2 (2.94), AMM-3 (3.78), ATP-2-S (3.21), MW-3 (4.00), TP-01 (0.284), TP-02 (19.9), TP-07 (2.96), TP-08 (2.84), TP-09 (4.78)

¹ Standards are listed in 40 CFR 192.02 Table 1 to subpart A; units are in mg/L.

² Uranium concentrations were converted to activity using the conversion factor of 687 pCi/mg and were subtracted from the gross alpha results in order to derive net alpha, which excludes uranium and radon.


Ken Karp
Site Hydrologist

4/11/02
Date

DATA ASSESSMENT

UGW Water Sampling Field Activities Verification Checklist

Project Moab
Date(s) of Verification 3-7-02

Date(s) of Water Sampling Dec 3 to Dec 6, 2001
Name of Verifier Sam Campbell

Response Comments
(Yes, No, N/A)

1. Is the SAP the primary document directing field procedures?

List other documents, SOP's, instructions.

Yes

Work order dated 11-8-01

2. Were the sampling locations specified in the planning documents sampled?

Yes

Except TP-03, no longer exists.

3. Was field equipment calibrated as specified in the above named documents?

Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?

Yes

Were the standard solutions used for the calibration and operational checks of the field instruments brought to within 10 degrees C of the temperature of the water to be sampled?

Yes

Was the calibration information recorded on the field data sheets?

NA

Yes

Yes

Yes

4. Was depth to water measured before purging?

Was this information used to calculate purge volume?

Yes

Yes

5. If conventional purging was used, were the wells purged until parameters stabilized and 3 casing volumes were removed, until the well was purged dry, or until 10 casing volumes were removed?

Yes

6. If low-flow purging was used, was the purge rate less than 0.125 gal/min, was the drawdown less than 0.3 ft, and was the low-flow purge volume removed prior to sampling?

NA

7. Were duplicates taken at a frequency of one per 20 samples?
8. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?
9. Were trip blanks prepared and included with each shipment of VOC samples?
10. Were QC samples assigned a fictitious site identification number?
Was the true identity of the samples recorded in the field notes?
11. Were samples collected in the containers specified?
Were certified pre-cleaned containers used for the sampling?
12. Were samples filtered and preserved as specified?
13. Were the number and types of samples collected as specified?
14. Were chain of custody records completed and was sample custody maintained?
15. Were sample ticket book numbers recorded on field data forms and on the chain of custody?
16. Are field data sheets signed and dated by the team leader?
17. Was all other pertinent information documented on the field data sheets?
18. Was the presence or absence of ice in the cooler documented at every sample location?
19. Were water levels measured at the locations specified in the planning documents?

Yes

Yes

NA

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No

No

No

Yes

NO_x and NH₄ aliquots were not preserved at wells T-PRO-7 and T-PRO-8; These wells were resampled the next week
Ni, Sr, and Ag also analyzed.

Several sheets were not signed

Many sheets were not signed in the "checked by" line

Not documented at several locations

DATA PACKAGE ASSESSMENT

REQUISITION NUMBERS: 17725 SITE: Moab, Utah LABORATORY: GJO ANALYSIS DATES: 12/10/01 → 1/11/02REVIEWER: JEFF PRICEJ.E. PriceJan 23, 02

	NAME (print)		SIGNATURE		Pc-210	Pb-210	DATE	Cl, Na ₂ SO ₄	TDS	NH ₄ ⁺		
	ICP-MS	ICP-AES	GFAA	FAA	NaBH ₄	AS	LSc	PC	IC	Gravimetric	Colorimetric	Other
CHAIN OF CUSTODY	OK	OK	NA	NA	OK	OK	OK	OK	OK	OK	OK	NA
HOLDING TIME	OK	OK			OK	OK	OK	OK	OK	OK	OK	
CALIB. VERIFICATION (For AS, internal tracer)	OK	OK			OK	OK	OK	OK	OK	NA	OK	
PREP. BLANKS (Only if digestion)	OK NA	NA			NA	⑧	⑦	OK	NA	NA	NA	
INT/CONT CAL. BLANKS	④	①			OK	NA	NA	NA	⑥	NA	NA	
ICP SERIAL DILUTION	OK	③	NA	NA	NA	NA	NA	NA	NA	NA	NA	
ICS (ICP only)	OK	OK	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LAB. CONTROL SAMPLE	OK	OK			OK	OK	OK	OK	OK	OK	OK	
DUPLICATES	OK	OK			OK	OK	OK	OK	OK	OK	OK	
POSTDIGEST. SPKS. (Only if MS fails)	NA	⑩ NA			NA	NA	NA	NA	NA	NA	NA	
MATRIX SPKS.	⑤	②			OK	OK	OK	OK	OK	NA	OK	
OVERALL ASSESS.	OK	OK	↓	↓	OK	OK	OK	OK	OK	OK	OK	↓

①

DATA REQUIRING FLAGS: Blank contamination: Ba samples 283539 (ctrl); Mg sample 283560 (1003); K sample 283545 (1001), 283560 (1003); Na sample 283545 (1001), 283560 (1003). ② Matrix spike failure for Cu samples ↓ 283560 → 283565. ③ Serial dilution failure for Ba samples 283560 → 283565 "J flag". ④ Blank contamination for Pb samples, all Ag samples, ⑤ Pb and Tl samples 283559 → 283565 get "J" flags for matrix spike failure. ⑥ Th-230 blank contamination for samples 283554 (mw-3), 283556 (Amm-3), 283558 (Amm-3), 283560 (Amm-3) See attached Page

Continued Flag Data for Moab Package

- (6) Blank contamination for SO₄ for samples
283545 (1001), 283560 (1003)
- (7) Prep blank contamination for Ra-228 samples 283554,
283561, 283562, 283563, 283565 - attach "U" flags.
- (8) Prep blank contamination for Po-210 samples: 283562,
283565 - attach "U" flags.

MOAB, UTAH
DECEMBER 2001 SAMPLING EVENT
DATA ASSESSMENT SUMMARY

The DOE-GJO Analytical Laboratory analyzed samples and reported results for this sampling event under requisition number 17725 for the Moab project.

RADIOLOGICAL ANALYSES

The determination of gross alpha was performed by gas proportional counting (PC). Lead-210, radium-226, and radium-228 were determined using liquid scintillation spectrometry (LSc). Polonium-210 was determined using alpha spectrometry (AS), and thorium-230 was determined by inductively coupled plasma-mass spectrometry (ICP-MS). The detection limits for gross alpha are higher than those specified in the planning documents due to high TDS in the samples. Although not requested, gross beta results are included in this report because gross beta activity is determined concurrently with gross alpha activity.

Radiological results that were less than the minimum detectable activity (MDA) and/or the 3-sigma counting statistic range (3σ) were qualified with a "U" flag (nondetect) in the database. These flags are listed in the data qualifiers column in the database printouts.

Several thorium-230, radium-228, and polonium-210 results were qualified with a "U" flag in the database because of prep blank contamination. These results are listed on the *Data Package Assessment* form, and the flags are listed in the data qualifiers column in the database printouts.

METALS/MAJOR CATIONS ANALYSES

The determination of barium, calcium, chromium, copper, iron, magnesium, manganese, molybdenum, nickel, potassium, sodium, strontium, vanadium, and zinc was performed by inductively coupled plasma-atomic emission spectrometer (ICP-AES). Antimony, cadmium, lead, silver, thallium, and uranium were analyzed by ICP-MS. Arsenic and selenium were analyzed by hydride generation atomic absorption spectroscopy (NaBH_4).

Various results were qualified with "U" flags in the database for continuing calibration blank contamination. Several barium results were qualified with a "J" flag (estimated) in the database because the serial dilution did not meet criteria. Selected lead and thallium results were qualified with a "J" flag in the database because the matrix spike recovery did not meet criteria. Qualified results are listed on the *Data Package Assessment* form, and the flags are listed in the data qualifiers column in the database printouts.

INORGANIC ANALYSES

Chloride, nitrate, and sulfate were determined by ion chromatography (IC). Ammonium was determined by spectrophotometry (colorimetry), and TDS was determined gravimetrically.

Sulfate results from the equipment blank samples were qualified with a "U" flag in the database because of continuing calibration blank contamination.

FIELD ANALYSIS/ACTIVITIES

Two equipment blanks were collected for the 23 locations where samples were collected using non-dedicated equipment. The equipment blanks were analyzed for the same constituents as the Moab environmental samples. All analyte concentrations in the equipment blanks were below their respective contract required detection limit (CRDL) or MDA/3 σ ; therefore, equipment blank results are acceptable.

Two field duplicate samples were collected for the 23 locations sampled. Duplicate samples were collected from well AMM-3 and surface water location CR-1. There are no established regulatory criteria for the evaluation of field duplicate samples; therefore, EPA guidance for *laboratory* duplicates (which is conservative for field duplicates) was used to assess the precision of the field duplicates. With the exception of one chloride result (40 relative percent difference [RPD]), duplicate results met the laboratory duplicate criteria (20 RPD) and are considered acceptable.

SUMMARY

All analytical quality control criteria were met except as qualified on the Ground Water Quality Data by Parameter, Surface Water Quality by Parameter, or equipment/trip blank database printouts. The meaning of data qualifiers is defined on the UMTRA database printouts or defined in the USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media Multi-Concentration, Document Number ILMO2.0, 1991. All data in this package are considered validated and may be treated as final results.


Sam Campbell
Data Validation Lead

3-11-02
Date

WATER QUALITY DATA

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:30 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity as CaCO ₃	mg/L	AMM-1	12/05/2001	0001	AL	B	138	#	-	-
	mg/L	AMM-1	12/05/2001	N001	AL	B	144	#	-	-
	mg/L	AMM-2	12/06/2001	0001	AL		1030	#	-	-
	mg/L	AMM-2	12/06/2001	N001	AL		1052	#	-	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	925	#	-	-
	mg/L	AMM-3	12/06/2001	N001	AL	D	915	#	-	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		825	#	-	-
	mg/L	ATP-2-S	12/06/2001	N001	AL		847	#	-	-
	mg/L	MW-3	12/05/2001	0001			1344	#	-	-
	mg/L	MW-3	12/05/2001	N001			1356	#	-	-
	mg/L	TP-01	12/06/2001	0001	AL		185	#	-	-
	mg/L	TP-01	12/06/2001	N001	AL		180	#	-	-
	mg/L	TP-02	12/06/2001	0001	AL		685	#	-	-
	mg/L	TP-02	12/06/2001	N001	AL		695	#	-	-
	mg/L	TP-07	12/06/2001	0001	AL		883	#	-	-
	mg/L	TP-07	12/06/2001	N001	AL		896	#	-	-
	mg/L	TP-08	12/06/2001	0001	AL		891	#	-	-
	mg/L	TP-08	12/06/2001	N001	AL		901	#	-	-
	mg/L	TP-09	12/06/2001	0001	AL		1102	#	-	-
	mg/L	TP-09	12/06/2001	N001	AL		1108	#	-	-
Ammonium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0042	U	# 0.0042	-
	mg/L	AMM-2	12/06/2001	0001	AL		1040.000		# 0.0042	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	291.000		# 0.0042	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	283.000		# 0.0042	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		757.000		# 0.0042	-
	mg/L	MW-3	12/05/2001	0001			1150.000		# 0.0042	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0083	B	# 0.0042	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:30 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Ammonium	mg/L	TP-02	12/06/2001	0001	AL		1.040		# 0.0042	-
	mg/L	TP-07	12/12/2001	0001	AL		97.800		# 0.0042	-
	mg/L	TP-08	12/12/2001	0001	AL		484.000		# 0.0042	-
	mg/L	TP-09	12/06/2001	0001	AL		1510.000		# 0.0042	-
Antimony	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0003	U	# 0.0003	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0003	U	# 0.0003	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0003	U	# 0.0003	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	MW-3	12/05/2001	0001			0.0003	U	# 0.0003	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
	mg/L	TP-09	12/06/2001	0001	AL		0.0003	U	# 0.0003	-
Arsenic	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0006	U	# 0.0006	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.00097	B	# 0.0006	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0036	B	# 0.0006	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0041	B	# 0.0006	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0006	U	# 0.0006	-
	mg/L	MW-3	12/05/2001	0001			0.0006	U	# 0.0006	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0017	B	# 0.0006	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0022	B	# 0.0006	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0006	U	# 0.0006	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0006	U	# 0.0006	-
	mg/L	TP-09	12/06/2001	0001	AL		0.0018	B	# 0.0006	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:30 p

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Barium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0222	B		#	0.0003	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.0218	BE		#	0.0003	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0194	B		#	0.0003	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0197	B		#	0.0003	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0204	B		#	0.0003	-
	mg/L	MW-3	12/05/2001	0001			0.0256	B		#	0.0003	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0241	BE	J	#	0.0003	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0199	BE	J	#	0.0003	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0184	BE	J	#	0.0003	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0165	BE	J	#	0.0003	-
Cadmium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0002	U		#	0.0002	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.0018			#	0.0002	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.00064	B		#	0.0002	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.00057	B		#	0.0002	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.001			#	0.0002	-
	mg/L	MW-3	12/05/2001	0001			0.0014			#	0.0002	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0002	U		#	0.0002	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0002	U		#	0.0002	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0002	U		#	0.0002	-
	mg/L	TP-08	12/06/2001	0001	AL		0.001			#	0.0002	-
Calcium	mg/L	AMM-1	12/05/2001	0001	AL	B	213.000			#	0.0653	-
	mg/L	AMM-2	12/06/2001	0001	AL		429.000			#	0.0653	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	499.000			#	0.0653	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	496.000			#	0.0653	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		501.000			#	0.0653	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:30 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY	
Calcium	mg/L	MW-3	12/05/2001	0001			440.000	#	0.0653	-	
	mg/L	TP-01	12/06/2001	0001	AL		403.000	#	0.0653	-	
	mg/L	TP-02	12/06/2001	0001	AL		302.000	#	0.0653	-	
	mg/L	TP-07	12/06/2001	0001	AL		490.000	#	0.0653	-	
	mg/L	TP-08	12/06/2001	0001	AL		473.000	#	0.0653	-	
	mg/L	TP-09	12/06/2001	0001	AL		416.000	#	0.0653	-	
Chloride	mg/L	AMM-1	12/05/2001	0001	AL	B	3530.000	#	1.87	-	
	mg/L	AMM-2	12/06/2001	0001	AL		2790.000	#	7.48	-	
	mg/L	AMM-3	12/06/2001	0001	AL	D	7050.000	#	3.74	-	
	mg/L	AMM-3	12/06/2001	0002	AL	D	4690.000	#	3.74	-	
	mg/L	ATP-2-S	12/06/2001	0001	AL		3100.000	#	3.74	-	
	mg/L	MW-3	12/05/2001	0001			4570.000	#	7.48	-	
	mg/L	TP-01	12/06/2001	0001	AL		5750.000	#	3.74	-	
	mg/L	TP-02	12/06/2001	0001	AL		579.000	#	1.87	-	
	mg/L	TP-07	12/06/2001	0001	AL		2520.000	#	3.74	-	
	mg/L	TP-08	12/06/2001	0001	AL		2680.000	#	3.74	-	
	mg/L	TP-09	12/06/2001	0001	AL		1570.000	#	7.48	-	
Chromium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0008	U	#	0.0008	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.0008	U	#	0.0008	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0008	U	#	0.0008	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0008	U	#	0.0008	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0008	U	#	0.0008	-
	mg/L	MW-3	12/05/2001	0001			0.0008	U	#	0.0008	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0008	U	#	0.0008	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0008	U	#	0.0008	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0008	U	#	0.0008	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0008	U	#	0.0008	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY	
Chromium	mg/L	TP-09	12/06/2001	0001	AL		0.0008	U	#	0.0008	-	
Copper	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0006	U	#	0.0006	-	
	mg/L	AMM-2	12/06/2001	0001	AL		0.0062	BN	#	0.0006	-	
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0006	U	#	0.0006	-	
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0006	U	#	0.0006	-	
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0006	U	#	0.0006	-	
	mg/L	MW-3	12/05/2001	0001			0.0007	B	#	0.0006	-	
	mg/L	TP-01	12/06/2001	0001	AL		0.0006	UN	J	#	0.0006	-
	mg/L	TP-02	12/06/2001	0001	AL		0.00083	BN	J	#	0.0006	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0006	UN	J	#	0.0006	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0006	UN	J	#	0.0006	-
	mg/L	TP-09	12/06/2001	0001	AL		0.0043	BN	J	#	0.0006	-
Dissolved Oxygen	mg/L	AMM-1	12/05/2001	N001	AL	B	1.55		#	-	-	
	mg/L	AMM-2	12/06/2001	N001	AL		0.38		#	-	-	
	mg/L	AMM-3	12/06/2001	N001	AL	D	0.45		#	-	-	
	mg/L	ATP-2-S	12/06/2001	N001	AL		0.3		#	-	-	
	mg/L	MW-3	12/05/2001	N001			0.34		#	-	-	
	mg/L	TP-01	12/06/2001	N001	AL		0.29		#	-	-	
	mg/L	TP-02	12/06/2001	N001	AL		0.25		#	-	-	
	mg/L	TP-07	12/06/2001	N001	AL		0.46		#	-	-	
	mg/L	TP-08	12/06/2001	N001	AL		0.33		#	-	-	
	mg/L	TP-09	12/06/2001	N001	AL		0.46		#	-	-	
Gross Alpha	pCi/L	AMM-1	12/05/2001	0001	AL	B	-8.9	U	#	48.96	± 25.7	
	pCi/L	AMM-2	12/06/2001	0001	AL		1404.01		#	113.77	± 162.	
	pCi/L	AMM-3	12/06/2001	0001	AL	D	2227.87		#	145.13	± 231.	
	pCi/L	AMM-3	12/06/2001	0002	AL	D	2476.56		#	145.86	± 246.	

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Gross Alpha	pCi/L	ATP-2-S	12/06/2001	0001	AL		2066.63		#	109.85	± 196.	
	pCi/L	MW-3	12/05/2001	0001			1940.54		#	202.51	± 256.	
	pCi/L	TP-01	12/06/2001	0001	AL		158.39		#	108.62	± 74.9.	
	pCi/L	TP-02	12/06/2001	0001	AL		19016.16		#	42.21	± 891.	
	pCi/L	TP-07	12/06/2001	0001	AL		1766.68		#	110.9	± 181.	
	pCi/L	TP-08	12/06/2001	0001	AL		1590.54		#	108.88	± 169.	
	pCi/L	TP-09	12/06/2001	0001	AL		2383.69		#	108.1	± 211.	
Gross Beta	pCi/L	AMM-1	12/05/2001	0001	AL	B	39.26	U	#	39.89	± 24.5	
	pCi/L	AMM-2	12/06/2001	0001	AL		445.99		#	104.97	± 77.6	
	pCi/L	AMM-3	12/06/2001	0001	AL	D	661.71		#	141.5	± 106.	
	pCi/L	AMM-3	12/06/2001	0002	AL	D	613.06		#	142.43	± 105.	
	pCi/L	ATP-2-S	12/06/2001	0001	AL		592.32		#	107.64	± 84.4	
	pCi/L	MW-3	12/05/2001	0001			587.36		#	206.84	± 142.	
	pCi/L	TP-01	12/06/2001	0001	AL		58.78	U	#	100.08	± 60.0	
	pCi/L	TP-02	12/06/2001	0001	AL		2326.12		#	68.09	± 112.	
	pCi/L	TP-07	12/06/2001	0001	AL		414.46		#	106.42	± 77.1	
	pCi/L	TP-08	12/06/2001	0001	AL		404.32		#	105.8	± 76.4	
Iron	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0008	U	#	0.0008	-	
	mg/L	AMM-2	12/06/2001	0001	AL		0.0008	U	#	0.0008	-	
	mg/L	AMM-3	12/06/2001	0001	AL	D	11.000		#	0.0008	-	
	mg/L	AMM-3	12/06/2001	0002	AL	D	10.800		#	0.0008	-	
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.130		#	0.0008	-	
	mg/L	MW-3	12/05/2001	0001			0.135		#	0.0008	-	
	mg/L	TP-01	12/06/2001	0001	AL		0.0008	U	#	0.0008	-	
	mg/L	TP-02	12/06/2001	0001	AL		0.0298	B	#	0.0008	-	
	mg/L	TP-07	12/06/2001	0001	AL		0.350		#	0.0008	-	

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Iron	mg/L	TP-08	12/06/2001	0001	AL		0.215	#	0.0008	-
	mg/L	TP-09	12/06/2001	0001	AL		0.0008	U	#	0.0008
Lead	mg/L	AMM-1	12/05/2001	0001	AL	B	0.00042	B U	#	0.0001
	mg/L	AMM-2	12/06/2001	0001	AL		0.00099	BN UJ	#	0.0001
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0007	B U	#	0.0001
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.00059	B U	#	0.0001
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.00066	B U	#	0.0001
	mg/L	MW-3	12/05/2001	0001			0.0011	B U	#	0.0001
	mg/L	TP-01	12/06/2001	0001	AL		0.00043	BN UJ	#	0.0001
	mg/L	TP-02	12/06/2001	0001	AL		0.00038	BN UJ	#	0.0001
	mg/L	TP-07	12/06/2001	0001	AL		0.0006	BN UJ	#	0.0001
	mg/L	TP-08	12/06/2001	0001	AL		0.00053	BN UJ	#	0.0001
	mg/L	TP-09	12/06/2001	0001	AL		0.00068	BN UJ	#	0.0001
Lead-210	pCi/L	AMM-1	12/05/2001	0001	AL	B	-0.3	U	#	1.44 ± 0.83
	pCi/L	AMM-2	12/06/2001	0001	AL		0.74	U	#	1.44 ± 0.86
	pCi/L	AMM-3	12/06/2001	0001	AL	D	0.88	U	#	1.47 ± 0.88
	pCi/L	AMM-3	12/06/2001	0002	AL	D	0.35	U	#	1.43 ± 0.84
	pCi/L	ATP-2-S	12/06/2001	0001	AL		0.92	U	#	1.45 ± 0.87
	pCi/L	MW-3	12/05/2001	0001			0.74	U	#	1.16 ± 0.70
	pCi/L	TP-01	12/06/2001	0001	AL		0.11	U	#	1.16 ± 0.68
	pCi/L	TP-02	12/06/2001	0001	AL		1.39		#	1.36 ± 0.83
	pCi/L	TP-07	12/06/2001	0001	AL		0.34	U	#	1.25 ± 0.74
	pCi/L	TP-08	12/06/2001	0001	AL		0.88	U	#	1.18 ± 0.71
	pCi/L	TP-09	12/06/2001	0001	AL		0.38	U	#	1.26 ± 0.75
Magnesium	mg/L	AMM-1	12/05/2001	0001	AL	B	124.000		#	0.0042
	mg/L	AMM-2	12/06/2001	0001	AL		801.000		#	0.042

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Magnesium	mg/L	AMM-3	12/06/2001	0001	AL	D	706.000			#	0.042	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	707.000			#	0.042	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		718.000			#	0.042	-
	mg/L	MW-3	12/05/2001	0001			1300.000			#	0.042	-
	mg/L	TP-01	12/06/2001	0001	AL		199.000			#	0.0042	-
	mg/L	TP-02	12/06/2001	0001	AL		201.000			#	0.0042	-
	mg/L	TP-07	12/06/2001	0001	AL		670.000			#	0.042	-
	mg/L	TP-08	12/06/2001	0001	AL		708.000			#	0.042	-
	mg/L	TP-09	12/06/2001	0001	AL		883.000			#	0.042	-
Manganese	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0001	U		#	0.0001	-
	mg/L	AMM-2	12/06/2001	0001	AL		7.220			#	0.0001	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	3.490			#	0.0001	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	3.420			#	0.0001	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		4.590			#	0.0001	-
	mg/L	MW-3	12/05/2001	0001			8.400			#	0.0001	-
	mg/L	TP-01	12/06/2001	0001	AL		1.670			#	0.0001	-
	mg/L	TP-02	12/06/2001	0001	AL		0.457			#	0.0001	-
	mg/L	TP-07	12/06/2001	0001	AL		4.480			#	0.0001	-
	mg/L	TP-08	12/06/2001	0001	AL		2.400			#	0.0001	-
Mercury	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0002	U		#	0.0002	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.0002	U		#	0.0002	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0002	U		#	0.0002	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0002	U		#	0.0002	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0002	U		#	0.0002	-
	mg/L	MW-3	12/05/2001	0001			0.0002	U		#	0.0002	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0002	U		#	0.0002	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Mercury	mg/L	TP-02	12/06/2001	0001	AL		0.0002	U	#	0.0002
	mg/L	TP-07	12/06/2001	0001	AL		0.0002	U	#	0.0002
	mg/L	TP-08	12/06/2001	0001	AL		0.0002	U	#	0.0002
	mg/L	TP-09	12/06/2001	0001	AL		0.0002	U	#	0.0002
Molybdenum	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0019	U	#	0.0019
	mg/L	AMM-2	12/06/2001	0001	AL		1.070		#	0.0019
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.873		#	0.0019
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.855		#	0.0019
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.741		#	0.0019
	mg/L	MW-3	12/05/2001	0001			1.120		#	0.0019
	mg/L	TP-01	12/06/2001	0001	AL		0.0153		#	0.0019
	mg/L	TP-02	12/06/2001	0001	AL		0.552		#	0.0019
	mg/L	TP-07	12/06/2001	0001	AL		0.268		#	0.0019
	mg/L	TP-08	12/06/2001	0001	AL		0.866		#	0.0019
	mg/L	TP-09	12/06/2001	0001	AL		0.828		#	0.0019
Nickel	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0006	U	#	0.0006
	mg/L	AMM-2	12/06/2001	0001	AL		0.0227	B	#	0.0006
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0006	U	#	0.0006
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0006	U	#	0.0006
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0107	B	#	0.0006
	mg/L	MW-3	12/05/2001	0001			0.0077	B	#	0.0006
	mg/L	TP-01	12/06/2001	0001	AL		0.0006	U	#	0.0006
	mg/L	TP-02	12/06/2001	0001	AL		0.0032	B	#	0.0006
	mg/L	TP-07	12/06/2001	0001	AL		0.0023	B	#	0.0006
	mg/L	TP-08	12/06/2001	0001	AL		0.0072	B	#	0.0006
	mg/L	TP-09	12/06/2001	0001	AL		0.0147	B	#	0.0006

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Nitrate as NO ₃	mg/L	AMM-1	12/05/2001	0001	AL	B	1.360	#	0.0305	-
	mg/L	AMM-2	12/06/2001	0001	AL		213.000	#	0.1525	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0305	U	#	0.0305
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0305	U	#	0.0305
	mg/L	ATP-2-S	12/06/2001	0001	AL		2.310	#	0.0305	-
	mg/L	MW-3	12/05/2001	0001			271.000	#	0.1525	-
	mg/L	TP-01	12/06/2001	0001	AL		31.300	#	0.0305	-
	mg/L	TP-02	12/06/2001	0001	AL		4.060	#	0.0305	-
	mg/L	TP-07	12/12/2001	0001	AL		14.200	#	0.0305	-
	mg/L	TP-08	12/12/2001	0001	AL		22.700	#	0.0305	-
	mg/L	TP-09	12/06/2001	0001	AL		413.000	#	0.305	-
Oxidation Reduction Potent	mV	AMM-1	12/05/2001	N001	AL	B	66.9	#	-	-
	mV	AMM-2	12/06/2001	N001	AL		105	#	-	-
	mV	AMM-3	12/06/2001	N001	AL	D	-89	#	-	-
	mV	ATP-2-S	12/06/2001	N001	AL		12.1	#	-	-
	mV	MW-3	12/05/2001	N001			30.1	#	-	-
	mV	TP-01	12/06/2001	N001	AL		-12	#	-	-
	mV	TP-02	12/06/2001	N001	AL		-57	#	-	-
	mV	TP-07	12/06/2001	N001	AL		48	#	-	-
	mV	TP-08	12/06/2001	N001	AL		59	#	-	-
	mV	TP-09	12/06/2001	N001	AL		-13	#	-	-
pH	s.u.	AMM-1	12/05/2001	N001	AL	B	7.43	#	-	-
	s.u.	AMM-2	12/06/2001	N001	AL		6.85	#	-	-
	s.u.	AMM-3	12/06/2001	N001	AL	D	6.89	#	-	-
	s.u.	ATP-2-S	12/06/2001	N001	AL		6.83	#	-	-
	s.u.	MW-3	12/05/2001	N001			6.88	#	-	-
	s.u.	TP-01	12/06/2001	N001	AL		7.43	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY	
pH	s.u.	TP-02	12/06/2001	N001	AL		7.04	#	-	-	
	s.u.	TP-07	12/06/2001	N001	AL		6.97	#	-	-	
	s.u.	TP-08	12/06/2001	N001	AL		6.88	#	-	-	
	s.u.	TP-09	12/06/2001	N001	AL		6.82	#	-	-	
Polonium-210	pCi/L	AMM-1	12/05/2001	0001	AL	B	0.107	#	0.0594	± 0.05	
	pCi/L	AMM-2	12/06/2001	0001	AL		0.0693	#	0.0566	± 0.04	
	pCi/L	AMM-3	12/06/2001	0001	AL	D	0.0804	#	0.0551	± 0.04	
	pCi/L	AMM-3	12/06/2001	0002	AL	D	0.0505	U	#	0.0713	± 0.04
	pCi/L	ATP-2-S	12/06/2001	0001	AL		0.0774	#	0.0634	± 0.05	
	pCi/L	MW-3	12/05/2001	0001			0.028	UB	#	0.0596	± 0.03
	pCi/L	TP-01	12/06/2001	0001	AL		0.089	B U #	0.0716	± 0.05	
	pCi/L	TP-02	12/06/2001	0001	AL		1.0107	B	#	0.3576	± 0.34
	pCi/L	TP-07	12/06/2001	0001	AL		0.0874	B U #	0.0614	± 0.04	
	pCi/L	TP-08	12/06/2001	0001	AL		0.061	UB	#	0.0674	± 0.04
	pCi/L	TP-09	12/06/2001	0001	AL		0.0798	UB	#	0.1021	± 0.06
Potassium	mg/L	AMM-1	12/05/2001	0001	AL	B	52.400	#	0.0151	-	
	mg/L	AMM-2	12/06/2001	0001	AL		150.000	#	0.151	-	
	mg/L	AMM-3	12/06/2001	0001	AL	D	211.000	#	0.151	-	
	mg/L	AMM-3	12/06/2001	0002	AL	D	212.000	#	0.151	-	
	mg/L	ATP-2-S	12/06/2001	0001	AL		138.000	#	0.0151	-	
	mg/L	MW-3	12/05/2001	0001			178.000	#	0.0151	-	
	mg/L	TP-01	12/06/2001	0001	AL		82.700	#	0.0151	-	
	mg/L	TP-02	12/06/2001	0001	AL		22.400	#	0.0151	-	
	mg/L	TP-07	12/06/2001	0001	AL		179.000	#	0.0151	-	
	mg/L	TP-08	12/06/2001	0001	AL		177.000	#	0.0151	-	
	mg/L	TP-09	12/06/2001	0001	AL		157.000	#	0.151	-	

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Radium-226	pCi/L	AMM-1	12/05/2001	0001	AL	B	0.07		#		0.05	± 0.03
	pCi/L	AMM-2	12/06/2001	0001	AL		0.19		#		0.1	± 0.07
	pCi/L	AMM-3	12/06/2001	0001	AL	D	0.37		#		0.06	± 0.06
	pCi/L	AMM-3	12/06/2001	0002	AL	D	0.37		#		0.07	± 0.06
	pCi/L	ATP-2-S	12/06/2001	0001	AL		0.16		#		0.08	± 0.05
	pCi/L	MW-3	12/05/2001	0001			0.49		#		0.17	± 0.12
	pCi/L	TP-01	12/06/2001	0001	AL		0.04	U	#		0.13	± 0.07
	pCi/L	TP-02	12/06/2001	0001	AL		0.13		#		0.11	± 0.07
	pCi/L	TP-07	12/06/2001	0001	AL		0.04	U	#		0.12	± 0.07
	pCi/L	TP-08	12/06/2001	0001	AL		0.08	U	#		0.12	± 0.07
	pCi/L	TP-09	12/06/2001	0001	AL		-0.03	U	#		0.15	± 0.08
Radium-228	pCi/L	AMM-1	12/05/2001	0001	AL	B	0.09	U	#		0.5	± 0.30
	pCi/L	AMM-2	12/06/2001	0001	AL		1.81		#		0.81	± 0.51
	pCi/L	AMM-3	12/06/2001	0001	AL	D	1.27		#		0.52	± 0.32
	pCi/L	AMM-3	12/06/2001	0002	AL	D	1.25		#		0.57	± 0.36
	pCi/L	ATP-2-S	12/06/2001	0001	AL		1.98		#		0.62	± 0.40
	pCi/L	MW-3	12/05/2001	0001			2.65	B	U	#	0.63	± 0.42
	pCi/L	TP-01	12/06/2001	0001	AL		0.77	B	U	#	0.71	± 0.43
	pCi/L	TP-02	12/06/2001	0001	AL		0.52	U		#	0.76	± 0.45
	pCi/L	TP-07	12/06/2001	0001	AL		1.08	B	U	#	0.58	± 0.36
	pCi/L	TP-08	12/06/2001	0001	AL		0.91	B	U	#	0.63	± 0.38
	pCi/L	TP-09	12/06/2001	0001	AL		1.97	B	U	#	0.62	± 0.40
Selenium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0133		#		0.0003	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.010		#		0.0003	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.00034	B	#		0.0003	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.00045	B	#		0.0003	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.007		#		0.0003	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY	
								LAB	DATA	QA		
Selenium	mg/L	MW-3	12/05/2001	0001			0.0058		#	0.0003	-	
	mg/L	TP-01	12/06/2001	0001	AL		0.0129		#	0.0003	-	
	mg/L	TP-02	12/06/2001	0001	AL		0.0049	B	#	0.0003	-	
	mg/L	TP-07	12/06/2001	0001	AL		0.0003	U	#	0.0003	-	
	mg/L	TP-08	12/06/2001	0001	AL		0.00057	B	#	0.0003	-	
	mg/L	TP-09	12/06/2001	0001	AL		0.0479		#	0.0015	-	
Silver	mg/L	AMM-1	12/05/2001	0001	AL	B	0.00065	B	U	#	0.0001	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.00063	B	U	#	0.0001	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.00065	B	U	#	0.0001	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.00061	B	U	#	0.0001	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0006	B	U	#	0.0001	-
	mg/L	MW-3	12/05/2001	0001			0.00072	B	U	#	0.0001	-
	mg/L	TP-01	12/06/2001	0001	AL		0.00061	B	U	#	0.0001	-
	mg/L	TP-02	12/06/2001	0001	AL		0.00057	B	U	#	0.0001	-
	mg/L	TP-07	12/06/2001	0001	AL		0.00061	B	U	#	0.0001	-
	mg/L	TP-08	12/06/2001	0001	AL		0.00061	B	U	#	0.0001	-
	mg/L	TP-09	12/06/2001	0001	AL		0.0006	B	U	#	0.0001	-
Sodium	mg/L	AMM-1	12/05/2001	0001	AL	B	1920.000		#	0.074	-	
	mg/L	AMM-2	12/06/2001	0001	AL		3670.000		#	0.37	-	
	mg/L	AMM-3	12/06/2001	0001	AL	D	4730.000		#	0.37	-	
	mg/L	AMM-3	12/06/2001	0002	AL	D	4660.000		#	0.37	-	
	mg/L	ATP-2-S	12/06/2001	0001	AL		3140.000		#	0.37	-	
	mg/L	MW-3	12/05/2001	0001			6310.000		#	0.37	-	
	mg/L	TP-01	12/06/2001	0001	AL		3910.000		#	0.37	-	
	mg/L	TP-02	12/06/2001	0001	AL		795.000		#	0.074	-	
	mg/L	TP-07	12/06/2001	0001	AL		3460.000		#	0.37	-	
	mg/L	TP-08	12/06/2001	0001	AL		3340.000		#	0.37	-	

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Sodium	mg/L	TP-09	12/06/2001	0001	AL		2960.000	#	0.074	-
Specific Conductance	umhos/cm	AMM-1	12/05/2001	N001	AL	B	11170	#	-	-
	umhos/cm	AMM-2	12/06/2001	N001	AL		23720	#	-	-
	umhos/cm	AMM-3	12/06/2001	N001	AL	D	23650	#	-	-
	umhos/cm	ATP-2-S	12/06/2001	N001	AL		21160	#	-	-
	umhos/cm	MW-3	12/05/2001	N001			33260	#	-	-
	umhos/cm	TP-01	12/06/2001	N001	AL		19670	#	-	-
	umhos/cm	TP-02	12/06/2001	N001	AL		5653	#	-	-
	umhos/cm	TP-07	12/06/2001	N001	AL		18120	#	-	-
	umhos/cm	TP-08	12/06/2001	N001	AL		19990	#	-	-
	umhos/cm	TP-09	12/06/2001	N001	AL		23010	#	-	-
Strontium	mg/L	AMM-1	12/05/2001	0001	AL	B	5.390	#	0.001	-
	mg/L	AMM-2	12/06/2001	0001	AL		12.400	#	0.001	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	16.700	#	0.001	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	16.700	#	0.001	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		14.100	#	0.001	-
	mg/L	MW-3	12/05/2001	0001			12.600	#	0.001	-
	mg/L	TP-01	12/06/2001	0001	AL		12.700	#	0.001	-
	mg/L	TP-02	12/06/2001	0001	AL		6.920	#	0.001	-
	mg/L	TP-07	12/06/2001	0001	AL		16.200	#	0.001	-
	mg/L	TP-08	12/06/2001	0001	AL		15.500	#	0.001	-
	mg/L	TP-09	12/06/2001	0001	AL		11.600	#	0.001	-
Sulfate	mg/L	AMM-1	12/05/2001	0001	AL	B	1080.000	#	2.05	-
	mg/L	AMM-2	12/06/2001	0001	AL		12400.000	#	8.2	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	10000.000	#	4.1	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	9990.000	#	4.1	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Sulfate	mg/L	ATP-2-S	12/06/2001	0001	AL		6990.000		#		4.1	-
	mg/L	MW-3	12/05/2001	0001			18100.000		#		8.2	-
	mg/L	TP-01	12/06/2001	0001	AL		4220.000		#		4.1	-
	mg/L	TP-02	12/06/2001	0001	AL		2250.000		#		2.05	-
	mg/L	TP-07	12/06/2001	0001	AL		9010.000		#		4.1	-
	mg/L	TP-08	12/06/2001	0001	AL		9720.000		#		4.1	-
	mg/L	TP-09	12/06/2001	0001	AL		13300.000		#		8.2	-
Temperature	C	AMM-1	12/05/2001	N001	AL	B	18.2		#		-	-
	C	AMM-2	12/06/2001	N001	AL		15.89		#		-	-
	C	AMM-3	12/06/2001	N001	AL	D	20.28		#		-	-
	C	ATP-2-S	12/06/2001	N001	AL		17.11		#		-	-
	C	MW-3	12/05/2001	N001			17.09		#		-	-
	C	TP-01	12/06/2001	N001	AL		14.86		#		-	-
	C	TP-02	12/06/2001	N001	AL		15.22		#		-	-
	C	TP-07	12/06/2001	N001	AL		15.88		#		-	-
	C	TP-08	12/06/2001	N001	AL		15.06		#		-	-
	C	TP-09	12/06/2001	N001	AL		15.48		#		-	-
Thallium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0001	U		#	0.0001	-
	mg/L	AMM-2	12/06/2001	0001	AL		0.00067	BN	J	#	0.0001	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0001	U		#	0.0001	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0001	U		#	0.0001	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.00053	B		#	0.0001	-
	mg/L	MW-3	12/05/2001	0001			0.0001	U		#	0.0001	-
	mg/L	TP-01	12/06/2001	0001	AL		0.0001	UN	J	#	0.0001	-
	mg/L	TP-02	12/06/2001	0001	AL		0.0001	UN	J	#	0.0001	-
	mg/L	TP-07	12/06/2001	0001	AL		0.0001	UN	J	#	0.0001	-
	mg/L	TP-08	12/06/2001	0001	AL		0.0001	UN	J	#	0.0001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Thallium	mg/L	TP-09	12/06/2001	0001	AL		0.0022	BN	J	#	0.0001	-
Thorium-230	pCi/L	AMM-1	12/05/2001	0001	AL	B	1.6	U		#	1.56	-
	pCi/L	AMM-2	12/06/2001	0001	AL		3	B		#	1.56	-
	pCi/L	AMM-3	12/06/2001	0001	AL	D	3.9	B	U	#	1.56	-
	pCi/L	AMM-3	12/06/2001	0002	AL	D	1.6	U		#	1.56	-
	pCi/L	ATP-2-S	12/06/2001	0001	AL		1.9	B		#	1.56	-
	pCi/L	MW-3	12/05/2001	0001			5.8		U	#	1.56	-
	pCi/L	TP-01	12/06/2001	0001	AL		1.6	U		#	1.56	-
	pCi/L	TP-02	12/06/2001	0001	AL		3	B		#	1.56	-
	pCi/L	TP-07	12/06/2001	0001	AL		2.3	B		#	1.56	-
	pCi/L	TP-08	12/06/2001	0001	AL		1.6	U		#	1.56	-
	pCi/L	TP-09	12/06/2001	0001	AL		1.6	U		#	1.56	-
Total Dissolved Solids	mg/L	AMM-1	12/05/2001	0001	AL	B	6960			#	10	-
	mg/L	AMM-2	12/06/2001	0001	AL		19500			#	10	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	20400			#	10	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	20800			#	10	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		16500			#	10	-
	mg/L	MW-3	12/05/2001	0001			29500			#	10	-
	mg/L	TP-01	12/06/2001	0001	AL		14400			#	10	-
	mg/L	TP-02	12/06/2001	0001	AL		4750			#	10	-
	mg/L	TP-07	12/06/2001	0001	AL		17000			#	10	-
	mg/L	TP-08	12/06/2001	0001	AL		17100			#	10	-
	mg/L	TP-09	12/06/2001	0001	AL		18400			#	10	-
Turbidity	NTU	AMM-1	12/05/2001	N001	AL	B	0.2			#	-	-
	NTU	AMM-2	12/06/2001	N001	AL		0.5			#	-	-
	NTU	AMM-3	12/06/2001	N001	AL	D	1.6			#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Turbidity	NTU	ATP-2-S	12/06/2001	N001	AL		4.9	#	-	-
	NTU	MW-3	12/05/2001	N001			8.6	#	-	-
	NTU	TP-01	12/06/2001	N001	AL		5.1	#	-	-
	NTU	TP-02	12/06/2001	N001	AL		51	#	-	-
	NTU	TP-07	12/06/2001	N001	AL		4.3	#	-	-
	NTU	TP-08	12/06/2001	N001	AL		17	#	-	-
	NTU	TP-09	12/06/2001	N001	AL		5.5	#	-	-
Uranium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0042	#	0.0001	-
	mg/L	AMM-2	12/06/2001	0001	AL		2.940	#	0.0025	-
	mg/L	AMM-3	12/06/2001	0001	AL	D	3.780	#	0.0025	-
	mg/L	AMM-3	12/06/2001	0002	AL	D	3.780	#	0.0025	-
	mg/L	ATP-2-S	12/06/2001	0001	AL		3.210	#	0.0025	-
	mg/L	MW-3	12/05/2001	0001			4.000	#	0.0025	-
	mg/L	TP-01	12/06/2001	0001	AL		0.284	#	0.0001	-
	mg/L	TP-02	12/06/2001	0001	AL		19.900	#	0.005	-
	mg/L	TP-07	12/06/2001	0001	AL		2.960	#	0.0025	-
	mg/L	TP-08	12/06/2001	0001	AL		2.840	#	0.0025	-
	mg/L	TP-09	12/06/2001	0001	AL		4.780	#	0.0025	-
Vanadium	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0012	B	#	0.0003
	mg/L	AMM-2	12/06/2001	0001	AL		0.0117		#	0.0003
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0003	U	#	0.0003
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0003	U	#	0.0003
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0003	U	#	0.0003
	mg/L	MW-3	12/05/2001	0001			0.0023	B	#	0.0003
	mg/L	TP-01	12/06/2001	0001	AL		0.0012	B	#	0.0003
	mg/L	TP-02	12/06/2001	0001	AL		0.0003	U	#	0.0003
	mg/L	TP-07	12/06/2001	0001	AL		0.0003	U	#	0.0003

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Vanadium	mg/L	TP-08	12/06/2001	0001	AL		0.0003	U	#	0.0003
	mg/L	TP-09	12/06/2001	0001	AL		0.0019	B	#	0.0003
Zinc	mg/L	AMM-1	12/05/2001	0001	AL	B	0.0079	B	#	0.0054
	mg/L	AMM-2	12/06/2001	0001	AL		0.0054	U	#	0.0054
	mg/L	AMM-3	12/06/2001	0001	AL	D	0.0054	U	#	0.0054
	mg/L	AMM-3	12/06/2001	0002	AL	D	0.0054	U	#	0.0054
	mg/L	ATP-2-S	12/06/2001	0001	AL		0.0054	U	#	0.0054
	mg/L	MW-3	12/05/2001	0001			0.0054	U	#	0.0054
	mg/L	TP-01	12/06/2001	0001	AL		0.0054	U	#	0.0054
	mg/L	TP-02	12/06/2001	0001	AL		0.0071	B	#	0.0054
	mg/L	TP-07	12/06/2001	0001	AL		0.0054	U	#	0.0054
	mg/L	TP-08	12/06/2001	0001	AL		0.0108	B	#	0.0054
	mg/L	TP-09	12/06/2001	0001	AL		0.0054	U	#	0.0054

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:31 p

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
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RECORDS: SELECTED FROM USEE200 WHERE site_code='MOA01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE "R" OR data_validation_qualifiers LIKE "X") OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #12/1/2001# and #12/15/2001#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- | | | |
|--|----------------------------------|---|
| J Estimated value. | F Low flow sampling method used. | G Possible grout contamination, pH > 9. |
| L Less than 3 bore volumes purged prior to sampling. | R Unusable result. | X Location is undefined. |
| U Parameter analyzed for but was not detected. | | |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE			LAB	DATA	QA		
Alkalinity as CaCO ₃	mg/L	CR1	12/03/2001	0001	159			#	-	-
	mg/L	CR1	12/03/2001	N001	153			#	-	-
	mg/L	CR2	12/05/2001	0001	159			#	-	-
	mg/L	CR2	12/05/2001	N001	173			#	-	-
	mg/L	CR2-001	12/05/2001	0001	176			#	-	-
	mg/L	CR2-001	12/05/2001	N001	172			#	-	-
	mg/L	CR2B	12/04/2001	0001	171			#	-	-
	mg/L	CR2B	12/04/2001	N001	161			#	-	-
	mg/L	CR2B-001	12/04/2001	0001	157			#	-	-
	mg/L	CR2B-001	12/04/2001	N001	161			#	-	-
	mg/L	CR3	12/04/2001	0001	165			#	-	-
	mg/L	CR3	12/04/2001	N001	157			#	-	-
	mg/L	CR3-001	12/04/2001	0001	163			#	-	-
	mg/L	CR3-001	12/04/2001	N001	163			#	-	-
	mg/L	CR4	12/04/2001	0001	158			#	-	-
	mg/L	CR4	12/04/2001	N001	169			#	-	-
	mg/L	CR5	12/03/2001	0001	148			#	-	-
	mg/L	CR5	12/03/2001	N001	151			#	-	-
	mg/L	CRA	12/05/2001	0001	162			#	-	-
	mg/L	CRA	12/05/2001	N001	168			#	-	-
	mg/L	CRC	12/04/2001	0001	158			#	-	-
	mg/L	CRC	12/04/2001	N001	163			#	-	-
	mg/L	CRD	12/03/2001	0001	153			#	-	-
	mg/L	CRD	12/03/2001	N001	158			#	-	-
	mg/L	CRE	12/03/2001	0001	153			#	-	-
	mg/L	CRE	12/03/2001	N001	164			#	-	-
Ammonium	mg/L	CR1	12/03/2001	0001	0.0042 B			#	0.0042	-
	mg/L	CR1	12/03/2001	0002	0.0042 U			#	0.0042	-
	mg/L	CR2	12/05/2001	0001	1.600			#	0.0042	-
	mg/L	CR2-001	12/05/2001	0001	0.424			#	0.0042	-
	mg/L	CR2B	12/04/2001	0001	16.500			#	0.0042	-
	mg/L	CR2B-001	12/04/2001	0001	1.040			#	0.0042	-
	mg/L	CR3	12/04/2001	0001	1.990			#	0.0042	-
	mg/L	CR3-001	12/04/2001	0001	1.660			#	0.0042	-
	mg/L	CR4	12/04/2001	0001	0.537			#	0.0042	-
	mg/L	CR5	12/03/2001	0001	0.449			#	0.0042	-
	mg/L	CRA	12/05/2001	0001	0.0753 B			#	0.0042	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
						LAB	DATA	QA		
Ammonium	mg/L	CRC	12/04/2001	0001	0.846	#			0.0042	-
	mg/L	CRD	12/03/2001	0001	0.463	#			0.0042	-
	mg/L	CRE	12/03/2001	0001	0.203	#			0.0042	-
Antimony	mg/L	CR1	12/03/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR1	12/03/2001	0002	0.0003 U	#			0.0003	-
	mg/L	CR2	12/05/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR2-001	12/05/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR2B	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR2B-001	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR3	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR3-001	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR4	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CR5	12/03/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CRA	12/05/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CRC	12/04/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CRD	12/03/2001	0001	0.0003 U	#			0.0003	-
	mg/L	CRE	12/03/2001	0001	0.0003 U	#			0.0003	-
Arsenic	mg/L	CR1	12/03/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR1	12/03/2001	0002	0.0006 U	#			0.0006	-
	mg/L	CR2	12/05/2001	0001	0.0006 B	#			0.0006	-
	mg/L	CR2-001	12/05/2001	0001	0.0006 B	#			0.0006	-
	mg/L	CR2B	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR2B-001	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR3	12/04/2001	0001	0.0007 B	#			0.0006	-
	mg/L	CR3-001	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR4	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR5	12/03/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRA	12/05/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRC	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRD	12/03/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRE	12/03/2001	0001	0.0006 U	#			0.0006	-
Barium	mg/L	CR1	12/03/2001	0001	0.051 B	#			0.0003	-
	mg/L	CR1	12/03/2001	0002	0.0511 B	#			0.0003	-
	mg/L	CR2	12/05/2001	0001	0.0563 B	#			0.0003	-
	mg/L	CR2-001	12/05/2001	0001	0.0576 B	#			0.0003	-
	mg/L	CR2B	12/04/2001	0001	0.0522 B	#			0.0003	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION		SAMPLE: ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
		ID	DATE			LAB	DATA	QA		
Barium	mg/L	CR2B-001	12/04/2001	0001	0.0537	B	#		0.0003	-
	mg/L	CR3	12/04/2001	0001	0.0533	B	#		0.0003	-
	mg/L	CR3-001	12/04/2001	0001	0.0556	B	#		0.0003	-
	mg/L	CR4	12/04/2001	0001	0.0545	B	#		0.0003	-
	mg/L	CR5	12/03/2001	0001	0.0508	B	#		0.0003	-
	mg/L	CRA	12/05/2001	0001	0.0566	B	#		0.0003	-
	mg/L	CRC	12/04/2001	0001	0.0537	B	#		0.0003	-
	mg/L	CRD	12/03/2001	0001	0.0514	B	#		0.0003	-
	mg/L	CRE	12/03/2001	0001	0.0505	B	#		0.0003	-
Cadmium	mg/L	CR1	12/03/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR1	12/03/2001	0002	0.0002	U	#		0.0002	-
	mg/L	CR2	12/05/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR2-001	12/05/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR2B	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR2B-001	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR3	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR3-001	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR4	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CR5	12/03/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CRA	12/05/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CRC	12/04/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CRD	12/03/2001	0001	0.0002	U	#		0.0002	-
	mg/L	CRE	12/03/2001	0001	0.0002	U	#		0.0002	-
Calcium	mg/L	CR1	12/03/2001	0001	102.000		#		0.0653	-
	mg/L	CR1	12/03/2001	0002	102.000		#		0.0653	-
	mg/L	CR2	12/05/2001	0001	109.000		#		0.0653	-
	mg/L	CR2-001	12/05/2001	0001	108.000		#		0.0653	-
	mg/L	CR2B	12/04/2001	0001	114.000		#		0.0653	-
	mg/L	CR2B-001	12/04/2001	0001	106.000		#		0.0653	-
	mg/L	CR3	12/04/2001	0001	104.000		#		0.0653	-
	mg/L	CR3-001	12/04/2001	0001	108.000		#		0.0653	-
	mg/L	CR4	12/04/2001	0001	106.000		#		0.0653	-
	mg/L	CR5	12/03/2001	0001	103.000		#		0.0653	-
	mg/L	CRA	12/05/2001	0001	108.000		#		0.0653	-
	mg/L	CRC	12/04/2001	0001	104.000		#		0.0653	-
	mg/L	CRD	12/03/2001	0001	104.000		#		0.0653	-
	mg/L	CRE	12/03/2001	0001	102.000		#		0.0653	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION		SAMPLE ID	RESULT	QUALIFIERS:		DETECTION LIMIT	UN-CERTAINTY
		ID	DATE			LAB	DATA QA		
Chloride	mg/L	CR1	12/03/2001	0001	117.000	#	0.374	-	
	mg/L	CR1	12/03/2001	0002	118.000	#	0.374	-	
	mg/L	CR2	12/05/2001	0001	143.000	#	0.187	-	
	mg/L	CR2-001	12/05/2001	0001	140.000	#	0.187	-	
	mg/L	CR2B	12/04/2001	0001	172.000	#	0.374	-	
	mg/L	CR2B-001	12/04/2001	0001	126.000	#	0.187	-	
	mg/L	CR3	12/04/2001	0001	132.000	#	0.187	-	
	mg/L	CR3-001	12/04/2001	0001	134.000	#	0.187	-	
	mg/L	CR4	12/04/2001	0001	158.000	#	0.187	-	
	mg/L	CR5	12/03/2001	0001	150.000	#	0.187	-	
	mg/L	CRA	12/05/2001	0001	145.000	#	0.187	-	
	mg/L	CRC	12/04/2001	0001	151.000	#	0.187	-	
	mg/L	CRD	12/03/2001	0001	151.000	#	0.187	-	
	mg/L	CRE	12/03/2001	0001	137.000	#	0.187	-	
Chromium	mg/L	CR1	12/03/2001	0001	0.0013 B	#	0.0008	-	
	mg/L	CR1	12/03/2001	0002	0.0008 U	#	0.0008	-	
	mg/L	CR2	12/05/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR2-001	12/05/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR2B	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR2B-001	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR3	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR3-001	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR4	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CR5	12/03/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CRA	12/05/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CRC	12/04/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CRD	12/03/2001	0001	0.0008 U	#	0.0008	-	
	mg/L	CRE	12/03/2001	0001	0.0008 U	#	0.0008	-	
Copper	mg/L	CR1	12/03/2001	0001	0.0006 U	#	0.0006	-	
	mg/L	CR1	12/03/2001	0002	0.0006 U	#	0.0006	-	
	mg/L	CR2	12/05/2001	0001	0.0006 B	#	0.0006	-	
	mg/L	CR2-001	12/05/2001	0001	0.0006 U	#	0.0006	-	
	mg/L	CR2B	12/04/2001	0001	0.0006 U	#	0.0006	-	
	mg/L	CR2B-001	12/04/2001	0001	0.0006 U	#	0.0006	-	
	mg/L	CR3	12/04/2001	0001	0.0006 U	#	0.0006	-	
	mg/L	CR3-001	12/04/2001	0001	0.0006 U	#	0.0006	-	

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION		SAMPLE: ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
		ID	DATE			LAB	DATA	QA		
Copper	mg/L	CR4	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CR5	12/03/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRA	12/05/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRC	12/04/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRD	12/03/2001	0001	0.0006 U	#			0.0006	-
	mg/L	CRE	12/03/2001	0001	0.0006 U	#			0.0006	-
Dissolved Oxygen	mg/L	CR1	12/03/2001	N001	12.42	#			-	-
	mg/L	CR2	12/05/2001	N001	12.1	#			-	-
	mg/L	CR2-001	12/05/2001	N001	11.83	#			-	-
	mg/L	CR2B	12/04/2001	N001	11.77	#			-	-
	mg/L	CR2B-001	12/04/2001	N001	11.84	#			-	-
	mg/L	CR3	12/04/2001	N001	11.83	#			-	-
	mg/L	CR3-001	12/04/2001	N001	11.75	#			-	-
	mg/L	CR4	12/04/2001	N001	11.9	#			-	-
	mg/L	CR5	12/03/2001	N001	12.04	#			-	-
	mg/L	CRA	12/05/2001	N001	12.15	#			-	-
	mg/L	CRC	12/04/2001	N001	11.49	#			-	-
	mg/L	CRD	12/03/2001	N001	11.74	#			-	-
	mg/L	CRE	12/03/2001	N001	12.07	#			-	-
Gross Alpha	pCi/L	CR1	12/03/2001	0001	2.01 U	#	8.61	± 4.85		
	pCi/L	CR1	12/03/2001	0002	3.48 U	#	8.58	± 5.04		
	pCi/L	CR2	12/05/2001	0001	24.7	#	9.05	± 7.75		
	pCi/L	CR2-001	12/05/2001	0001	18.55	#	8.91	± 7.04		
	pCi/L	CR2B	12/04/2001	0001	95.45	#	12.99	± 16.2		
	pCi/L	CR2B-001	12/04/2001	0001	7.58 U	#	8.76	± 5.68		
	pCi/L	CR3	12/04/2001	0001	10.69	#	8.88	± 6.13		
	pCi/L	CR3-001	12/04/2001	0001	7.65 U	#	8.92	± 5.77		
	pCi/L	CR4	12/04/2001	0001	6.31 U	#	9.04	± 5.66		
	pCi/L	CR5	12/03/2001	0001	6.97 U	#	8.88	± 5.67		
	pCi/L	CRA	12/05/2001	0001	34.45	#	9.05	± 8.68		
	pCi/L	CRC	12/04/2001	0001	10.46	#	9.12	± 6.23		
	pCi/L	CRD	12/03/2001	0001	4.35 U	#	8.89	± 5.32		
	pCi/L	CRE	12/03/2001	0001	6.15 U	#	8.77	± 5.50		
Gross Beta	pCi/L	CR1	12/03/2001	0001	5.38 U	#	7.62	± 4.63		
	pCi/L	CR1	12/03/2001	0002	3.42 U	#	7.62	± 4.53		
	pCi/L	CR2	12/05/2001	0001	12.69	#	7.75	± 5.09		

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS: LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY
Gross Beta	pCi/L	CR2-001	12/05/2001	0001	6.19	U	#	7.71	± 4.73
	pCi/L	CR2B	12/04/2001	0001	25.52		#	10.01	± 7.03
	pCi/L	CR2B-001	12/04/2001	0001	4.96	U	#	7.65	± 4.63
	pCi/L	CR3	12/04/2001	0001	4.37	U	#	7.67	± 4.61
	pCi/L	CR3-001	12/04/2001	0001	8.17		#	7.65	± 4.81
	pCi/L	CR4	12/04/2001	0001	4.88	U	#	7.65	± 4.63
	pCi/L	CR5	12/03/2001	0001	3.83	U	#	7.65	± 4.57
	pCi/L	CRA	12/05/2001	0001	15.1		#	7.8	± 5.25
	pCi/L	CRC	12/04/2001	0001	10.28		#	7.67	± 4.93
	pCi/L	CRD	12/03/2001	0001	3.53	U	#	7.64	± 4.54
	pCi/L	CRE	12/03/2001	0001	3.47	U	#	7.64	± 4.54
Iron	mg/L	CR1	12/03/2001	0001	0.0178	B	#	0.0008	-
	mg/L	CR1	12/03/2001	0002	0.0075	B	#	0.0008	-
	mg/L	CR2	12/05/2001	0001	0.0095	B	#	0.0008	-
	mg/L	CR2-001	12/05/2001	0001	0.0055	B	#	0.0008	-
	mg/L	CR2B	12/04/2001	0001	0.0072	B	#	0.0008	-
	mg/L	CR2B-001	12/04/2001	0001	0.0054	B	#	0.0008	-
	mg/L	CR3	12/04/2001	0001	0.0081	B	#	0.0008	-
	mg/L	CR3-001	12/04/2001	0001	0.0037	B	#	0.0008	-
	mg/L	CR4	12/04/2001	0001	0.0088	B	#	0.0008	-
	mg/L	CR5	12/03/2001	0001	0.0051	B	#	0.0008	-
	mg/L	CRA	12/05/2001	0001	0.0036	B	#	0.0008	-
	mg/L	CRC	12/04/2001	0001	0.0057	B	#	0.0008	-
Lead	mg/L	CRD	12/03/2001	0001	0.0147	B	#	0.0008	-
	mg/L	CRE	12/03/2001	0001	0.0046	B	#	0.0008	-
	mg/L	CR1	12/03/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR1	12/03/2001	0002	0.0004	B	U	#	0.0001
	mg/L	CR2	12/05/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR2-001	12/05/2001	0001	0.0003	B	U	#	0.0001
	mg/L	CR2B	12/04/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR2B-001	12/04/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR3	12/04/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR3-001	12/04/2001	0001	0.0004	B	U	#	0.0001
	mg/L	CR4	12/04/2001	0001	0.0004	B	U	#	0.0001

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
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PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS: LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY
Lead	mg/L	CRD	12/03/2001	0001	0.0004	B	U	# 0.0001	-
	mg/L	CRE	12/03/2001	0001	0.0004	B	U	# 0.0001	-
Lead-210	pCi/L	CR1	12/03/2001	0001	0.43	U		# 1.38	± 0.82
	pCi/L	CR1	12/03/2001	0002	0.19	U		# 1.39	± 0.81
	pCi/L	CR2	12/05/2001	0001	-0.08	U		# 1.4	± 0.81
	pCi/L	CR2-001	12/05/2001	0001	-0.02	U		# 1.4	± 0.81
	pCi/L	CR2B	12/04/2001	0001	0.47	U		# 1.39	± 0.82
	pCi/L	CR2B-001	12/04/2001	0001	0.15	U		# 1.37	± 0.80
	pCi/L	CR3	12/04/2001	0001	0.25	U		# 1.34	± 0.78
	pCi/L	CR3-001	12/04/2001	0001	0.16	U		# 1.35	± 0.79
	pCi/L	CR4	12/04/2001	0001	0.73	U		# 1.37	± 0.82
	pCi/L	CR5	12/03/2001	0001	0.05	U		# 1.4	± 0.82
	pCi/L	CRA	12/05/2001	0001	0.62	U		# 1.41	± 0.84
	pCi/L	CRC	12/04/2001	0001	0.34	U		# 1.43	± 0.84
Magnesium	mg/L	CR1	12/03/2001	0001	34.100			# 0.0042	-
	mg/L	CR1	12/03/2001	0002	34.300			# 0.0042	-
	mg/L	CR2	12/05/2001	0001	37.600			# 0.0042	-
	mg/L	CR2-001	12/05/2001	0001	36.700			# 0.0042	-
	mg/L	CR2B	12/04/2001	0001	57.200			# 0.0042	-
	mg/L	CR2B-001	12/04/2001	0001	36.200			# 0.0042	-
	mg/L	CR3	12/04/2001	0001	36.600			# 0.0042	-
	mg/L	CR3-001	12/04/2001	0001	37.400			# 0.0042	-
	mg/L	CR4	12/04/2001	0001	36.100			# 0.0042	-
	mg/L	CR5	12/03/2001	0001	34.700			# 0.0042	-
	mg/L	CRA	12/05/2001	0001	36.500			# 0.0042	-
	mg/L	CRC	12/04/2001	0001	35.700			# 0.0042	-
Manganese	mg/L	CRD	12/03/2001	0001	35.300			# 0.0042	-
	mg/L	CRE	12/03/2001	0001	34.400			# 0.0042	-
	mg/L	CR1	12/03/2001	0001	0.014			# 0.0001	-
	mg/L	CR1	12/03/2001	0002	0.0145			# 0.0001	-
	mg/L	CR2	12/05/2001	0001	0.0268			# 0.0001	-
	mg/L	CR2-001	12/05/2001	0001	0.0154			# 0.0001	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE: ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
		ID	DATE			LAB	DATA	QA		
Manganese	mg/L	CR3	12/04/2001	0001	0.0247			#	0.0001	-
	mg/L	CR3-001	12/04/2001	0001	0.0251			#	0.0001	-
	mg/L	CR4	12/04/2001	0001	0.0191			#	0.0001	-
	mg/L	CR5	12/03/2001	0001	0.0175			#	0.0001	-
	mg/L	CRA	12/05/2001	0001	0.0139			#	0.0001	-
	mg/L	CRC	12/04/2001	0001	0.0209			#	0.0001	-
	mg/L	CRD	12/03/2001	0001	0.0186			#	0.0001	-
	mg/L	CRE	12/03/2001	0001	0.0142			#	0.0001	-
Mercury	mg/L	CR1	12/03/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR1	12/03/2001	0002	0.0002 U			#	0.0002	-
	mg/L	CR2	12/05/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR2-001	12/05/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR2B	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR2B-001	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR3	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR3-001	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR4	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CR5	12/03/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CRA	12/05/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CRC	12/04/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CRD	12/03/2001	0001	0.0002 U			#	0.0002	-
	mg/L	CRE	12/03/2001	0001	0.0002 U			#	0.0002	-
Molybdenum	mg/L	CR1	12/03/2001	0001	0.0037 B			#	0.0019	-
	mg/L	CR1	12/03/2001	0002	0.0028 B			#	0.0019	-
	mg/L	CR2	12/05/2001	0001	0.0115			#	0.0019	-
	mg/L	CR2-001	12/05/2001	0001	0.0048 B			#	0.0019	-
	mg/L	CR2B	12/04/2001	0001	0.0313			#	0.0019	-
	mg/L	CR2B-001	12/04/2001	0001	0.0046 B			#	0.0019	-
	mg/L	CR3	12/04/2001	0001	0.0027 B			#	0.0019	-
	mg/L	CR3-001	12/04/2001	0001	0.0045 B			#	0.0019	-
	mg/L	CR4	12/04/2001	0001	0.0037 B			#	0.0019	-
	mg/L	CR5	12/03/2001	0001	0.0031 B			#	0.0019	-
	mg/L	CRA	12/05/2001	0001	0.0043 B			#	0.0019	-
	mg/L	CRC	12/04/2001	0001	0.0043 B			#	0.0019	-
	mg/L	CRD	12/03/2001	0001	0.0028 B			#	0.0019	-
	mg/L	CRE	12/03/2001	0001	0.0039 B			#	0.0019	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE			LAB	DATA	QA		
Nickel	mg/L	CR1	12/03/2001	0001	0.0015 B		#	0.0006	-	
	mg/L	CR1	12/03/2001	0002	0.0006 U		#	0.0006	-	
	mg/L	CR2	12/05/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CR2-001	12/05/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CR2B	12/04/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CR2B-001	12/04/2001	0001	0.0006 B		#	0.0006	-	
	mg/L	CR3	12/04/2001	0001	0.0014 B		#	0.0006	-	
	mg/L	CR3-001	12/04/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CR4	12/04/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CR5	12/03/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CRA	12/05/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CRC	12/04/2001	0001	0.0006 U		#	0.0006	-	
	mg/L	CRD	12/03/2001	0001	0.0006 B		#	0.0006	-	
	mg/L	CRE	12/03/2001	0001	0.0006 U		#	0.0006	-	
Nitrate as NO ₃	mg/L	CR1	12/03/2001	0001	3.410		#	0.0305	-	
	mg/L	CR1	12/03/2001	0002	3.330		#	0.0305	-	
	mg/L	CR2	12/05/2001	0001	4.930		#	0.0305	-	
	mg/L	CR2-001	12/05/2001	0001	4.000		#	0.0305	-	
	mg/L	CR2B	12/04/2001	0001	10.900		#	0.0305	-	
	mg/L	CR2B-001	12/04/2001	0001	4.290		#	0.0305	-	
	mg/L	CR3	12/04/2001	0001	4.440		#	0.0305	-	
	mg/L	CR3-001	12/04/2001	0001	4.310		#	0.0305	-	
	mg/L	CR4	12/04/2001	0001	3.730		#	0.0305	-	
	mg/L	CR5	12/03/2001	0001	3.490		#	0.0305	-	
	mg/L	CRA	12/05/2001	0001	3.930		#	0.0305	-	
	mg/L	CRC	12/04/2001	0001	3.940		#	0.0305	-	
	mg/L	CRD	12/03/2001	0001	3.570		#	0.0305	-	
	mg/L	CRE	12/03/2001	0001	3.470		#	0.0305	-	
Oxidation Reduction Potent mV	mV	CR1	12/03/2001	N001	55.3		#	-	-	
	mV	CR2	12/05/2001	N001	166		#	-	-	
	mV	CR2-001	12/05/2001	N001	160		#	-	-	
	mV	CR2B	12/04/2001	N001	116		#	-	-	
	mV	CR2B-001	12/04/2001	N001	111		#	-	-	
	mV	CR3	12/04/2001	N001	183		#	-	-	
	mV	CR3-001	12/04/2001	N001	186		#	-	-	
	mV	CR4	12/04/2001	N001	145		#	-	-	
	mV	CR5	12/03/2001	N001	166		#	-	-	

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS	DETECTION LIMIT	UN-CERTAINTY
					LAB DATA	QA		
Oxidation Reduction Potential	mV	CRA	12/05/2001	N001	166	#	-	-
	mV	CRC	12/04/2001	N001	106	#	-	-
	mV	CRD	12/03/2001	N001	184	#	-	-
	mV	CRE	12/03/2001	N001	109	#	-	-
pH	s.u.	CR1	12/03/2001	N001	8.32	#	-	-
	s.u.	CR2	12/05/2001	N001	8.41	#	-	-
	s.u.	CR2-001	12/05/2001	N001	8.18	#	-	-
	s.u.	CR2B	12/04/2001	N001	8.38	#	-	-
	s.u.	CR2B-001	12/04/2001	N001	8.45	#	-	-
	s.u.	CR3	12/04/2001	N001	8.48	#	-	-
	s.u.	CR3-001	12/04/2001	N001	8.48	#	-	-
	s.u.	CR4	12/04/2001	N001	8.49	#	-	-
	s.u.	CR5	12/03/2001	N001	8.54	#	-	-
	s.u.	CRA	12/05/2001	N001	8.41	#	-	-
	s.u.	CRC	12/04/2001	N001	8.35	#	-	-
	s.u.	CRD	12/03/2001	N001	8.5	#	-	-
	s.u.	CRE	12/03/2001	N001	8.52	#	-	-
Polonium-210	pCi/L	CR1	12/03/2001	0001	0.045 U	#	0.1054	± 0.06
	pCi/L	CR1	12/03/2001	0002	0.0224 U	#	0.0902	± 0.05
	pCi/L	CR2	12/05/2001	0001	0.0759 U	#	0.0808	± 0.05
	pCi/L	CR2-001	12/05/2001	0001	0.0457 U	#	0.0539	± 0.04
	pCi/L	CR2B	12/04/2001	0001	0.1332	#	0.1002	± 0.07
	pCi/L	CR2B-001	12/04/2001	0001	0.0846 U	#	0.1053	± 0.06
	pCi/L	CR3	12/04/2001	0001	0.0694 U	#	0.1304	± 0.07
	pCi/L	CR3-001	12/04/2001	0001	0.0492 U	#	0.0924	± 0.05
	pCi/L	CR4	12/04/2001	0001	0.0371 U	#	0.0945	± 0.05
	pCi/L	CR5	12/03/2001	0001	0.0403 U	#	0.0978	± 0.05
	pCi/L	CRA	12/05/2001	0001	0.0783	#	0.0627	± 0.05
	pCi/L	CRC	12/04/2001	0001	0.0274 U	#	0.0674	± 0.04
	pCi/L	CRD	12/03/2001	0001	0.0777 U	#	0.0856	± 0.05
	pCi/L	CRE	12/03/2001	0001	0.0269 U	#	0.0603	± 0.03
Potassium	mg/L	CR1	12/03/2001	0001	3.710	#	0.0151	-
	mg/L	CR1	12/03/2001	0002	3.750	#	0.0151	-
	mg/L	CR2	12/05/2001	0001	4.330	#	0.0151	-
	mg/L	CR2-001	12/05/2001	0001	4.160	#	0.0151	-
	mg/L	CR2B	12/04/2001	0001	7.880	#	0.0151	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE			LAB	DATA	QA		
Potassium	mg/L	CR2B-001	12/04/2001	0001	4.000		#		0.0151	-
	mg/L	CR3	12/04/2001	0001	4.380		#		0.0151	-
	mg/L	CR3-001	12/04/2001	0001	4.430		#		0.0151	-
	mg/L	CR4	12/04/2001	0001	4.420		#		0.0151	-
	mg/L	CR5	12/03/2001	0001	4.100		#		0.0151	-
	mg/L	CRA	12/05/2001	0001	4.120		#		0.0151	-
	mg/L	CRC	12/04/2001	0001	4.310		#		0.0151	-
	mg/L	CRD	12/03/2001	0001	4.210		#		0.0151	-
	mg/L	CRE	12/03/2001	0001	3.940		#		0.0151	-
Radium-226	pCi/L	CR1	12/03/2001	0001	0.14		#		0.06	± 0.04
	pCi/L	CR1	12/03/2001	0002	0.12		#		0.06	± 0.04
	pCi/L	CR2	12/05/2001	0001	0.16		#		0.06	± 0.04
	pCi/L	CR2-001	12/05/2001	0001	0.17		#		0.06	± 0.04
	pCi/L	CR2B	12/04/2001	0001	0.16		#		0.06	± 0.04
	pCi/L	CR2B-001	12/04/2001	0001	0.18		#		0.06	± 0.04
	pCi/L	CR3	12/04/2001	0001	0.16		#		0.06	± 0.04
	pCi/L	CR3-001	12/04/2001	0001	0.2		#		0.1	± 0.07
	pCi/L	CR4	12/04/2001	0001	0.15		#		0.06	± 0.04
	pCi/L	CR5	12/03/2001	0001	0.16		#		0.06	± 0.05
	pCi/L	CRA	12/05/2001	0001	0.15		#		0.09	± 0.06
	pCi/L	CRC	12/04/2001	0001	0.2		#		0.06	± 0.05
	pCi/L	CRD	12/03/2001	0001	0.17		#		0.07	± 0.05
	pCi/L	CRE	12/03/2001	0001	0.2		#		0.06	± 0.05
Radium-228	pCi/L	CR1	12/03/2001	0001	-0.21	U	#		0.52	± 0.31
	pCi/L	CR1	12/03/2001	0002	-0.26	U	#		0.53	± 0.31
	pCi/L	CR2	12/05/2001	0001	0.06	U	#		0.55	± 0.32
	pCi/L	CR2-001	12/05/2001	0001	0.04	U	#		0.57	± 0.34
	pCi/L	CR2B	12/04/2001	0001	0.19	U	#		0.54	± 0.32
	pCi/L	CR2B-001	12/04/2001	0001	-0.05	U	#		0.55	± 0.32
	pCi/L	CR3	12/04/2001	0001	-0.01	U	#		0.58	± 0.34
	pCi/L	CR3-001	12/04/2001	0001	-0.37	U	#		0.96	± 0.56
	pCi/L	CR4	12/04/2001	0001	0.04	U	#		0.57	± 0.34
	pCi/L	CR5	12/03/2001	0001	-0.02	U	#		0.58	± 0.34
	pCi/L	CRA	12/05/2001	0001	-0.33	U	#		0.88	± 0.51
	pCi/L	CRC	12/04/2001	0001	-0.29	U	#		0.58	± 0.34
	pCi/L	CRD	12/03/2001	0001	-0.24	U	#		0.65	± 0.38
	pCi/L	CRE	12/03/2001	0001	-0.13	U	#		0.6	± 0.35

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS	DETECTION LIMIT	UN-CERTAINTY
		LAB	DATA	QA				
Selenium	mg/L	CR1	12/03/2001	0001	0.0062	#	0.0003	-
	mg/L	CR1	12/03/2001	0002	0.006	#	0.0003	-
	mg/L	CR2	12/05/2001	0001	0.0058	#	0.0003	-
	mg/L	CR2-001	12/05/2001	0001	0.0055	#	0.0003	-
	mg/L	CR2B	12/04/2001	0001	0.0056	#	0.0003	-
	mg/L	CR2B-001	12/04/2001	0001	0.006	#	0.0003	-
	mg/L	CR3	12/04/2001	0001	0.0061	#	0.0003	-
	mg/L	CR3-001	12/04/2001	0001	0.006	#	0.0003	-
	mg/L	CR4	12/04/2001	0001	0.006	#	0.0003	-
	mg/L	CR5	12/03/2001	0001	0.006	#	0.0003	-
	mg/L	CRA	12/05/2001	0001	0.0063	#	0.0003	-
	mg/L	CRC	12/04/2001	0001	0.006	#	0.0003	-
Silver	mg/L	CR1	12/03/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR1	12/03/2001	0002	0.0006 B	U	#	0.0001
	mg/L	CR2	12/05/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR2-001	12/05/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR2B	12/04/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR2B-001	12/04/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR3	12/04/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR3-001	12/04/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR4	12/04/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CR5	12/03/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CRA	12/05/2001	0001	0.0005 B	U	#	0.0001
	mg/L	CRC	12/04/2001	0001	0.0005 B	U	#	0.0001
Sodium	mg/L	CR1	12/03/2001	0001	108.000	#	0.0074	-
	mg/L	CR1	12/03/2001	0002	107.000	#	0.0074	-
	mg/L	CR2	12/05/2001	0001	133.000	#	0.0074	-
	mg/L	CR2-001	12/05/2001	0001	125.000	#	0.0074	-
	mg/L	CR2B	12/04/2001	0001	220.000	#	0.0074	-
	mg/L	CR2B-001	12/04/2001	0001	117.000	#	0.0074	-
	mg/L	CR3	12/04/2001	0001	123.000	#	0.0074	-
	mg/L	CR3-001	12/04/2001	0001	126.000	#	0.0074	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS	DETECTION LIMIT	UN-CERTAINTY
		LAB	DATA	QA				
Sodium	mg/L	CR4	12/04/2001	0001	132.000	#	0.0074	-
	mg/L	CR5	12/03/2001	0001	124.000	#	0.0074	-
	mg/L	CRA	12/05/2001	0001	126.000	#	0.0074	-
	mg/L	CRC	12/04/2001	0001	129.000	#	0.0074	-
	mg/L	CRD	12/03/2001	0001	125.000	#	0.0074	-
	mg/L	CRE	12/03/2001	0001	116.000	#	0.0074	-
Specific Conductance	umhos/cm	CR1	12/03/2001	N001	1250	#	-	-
	umhos/cm	CR2	12/05/2001	N001	1406	#	-	-
	umhos/cm	CR2-001	12/05/2001	N001	1371	#	-	-
	umhos/cm	CR2B	12/04/2001	N001	1641	#	-	-
	umhos/cm	CR2B-001	12/04/2001	N001	1673	#	-	-
	umhos/cm	CR3	12/04/2001	N001	1378	#	-	-
	umhos/cm	CR3-001	12/04/2001	N001	1380	#	-	-
	umhos/cm	CR4	12/04/2001	N001	1327	#	-	-
	umhos/cm	CR5	12/03/2001	N001	1371	#	-	-
	umhos/cm	CRA	12/05/2001	N001	1396	#	-	-
	umhos/cm	CRC	12/04/2001	N001	1413	#	-	-
	umhos/cm	CRD	12/03/2001	N001	1377	#	-	-
	umhos/cm	CRE	12/03/2001	N001	1307	#	-	-
Strontium	mg/L	CR1	12/03/2001	0001	1.170	#	0.0001	-
	mg/L	CR1	12/03/2001	0002	1.170	#	0.0001	-
	mg/L	CR2	12/05/2001	0001	1.270	#	0.0001	-
	mg/L	CR2-001	12/05/2001	0001	1.230	#	0.0001	-
	mg/L	CR2B	12/04/2001	0001	1.460	#	0.0001	-
	mg/L	CR2B-001	12/04/2001	0001	1.220	#	0.0001	-
	mg/L	CR3	12/04/2001	0001	1.210	#	0.0001	-
	mg/L	CR3-001	12/04/2001	0001	1.240	#	0.0001	-
	mg/L	CR4	12/04/2001	0001	1.220	#	0.0001	-
	mg/L	CR5	12/03/2001	0001	1.190	#	0.0001	-
	mg/L	CRA	12/05/2001	0001	1.230	#	0.0001	-
	mg/L	CRC	12/04/2001	0001	1.220	#	0.0001	-
	mg/L	CRD	12/03/2001	0001	1.200	#	0.0001	-
	mg/L	CRE	12/03/2001	0001	1.170	#	0.0001	-
Sulfate	mg/L	CR1	12/03/2001	0001	370.000	#	0.41	-
	mg/L	CR1	12/03/2001	0002	370.000	#	0.41	-
	mg/L	CR2	12/05/2001	0001	394.000	#	0.205	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE: ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
		ID	DATE			LAB	DATA	QA		
Sulfate	mg/L	CR2-001	12/05/2001	0001	380.000			#	0.205	-
	mg/L	CR2B	12/04/2001	0001	567.000			#	0.41	-
	mg/L	CR2B-001	12/04/2001	0001	391.000			#	0.205	-
	mg/L	CR3	12/04/2001	0001	372.000			#	0.205	-
	mg/L	CR3-001	12/04/2001	0001	377.000			#	0.205	-
	mg/L	CR4	12/04/2001	0001	370.000			#	0.205	-
	mg/L	CR5	12/03/2001	0001	373.000			#	0.205	-
	mg/L	CRA	12/05/2001	0001	386.000			#	0.205	-
	mg/L	CRC	12/04/2001	0001	379.000			#	0.205	-
	mg/L	CRD	12/03/2001	0001	376.000			#	0.205	-
	mg/L	CRE	12/03/2001	0001	370.000			#	0.205	-
Temperature	C	CR1	12/03/2001	N001	4.13			#	-	-
	C	CR2	12/05/2001	N001	3.97			#	-	-
	C	CR2-001	12/05/2001	N001	3.61			#	-	-
	C	CR2B	12/04/2001	N001	3.03			#	-	-
	C	CR2B-001	12/04/2001	N001	3.5			#	-	-
	C	CR3	12/04/2001	N001	3.89			#	-	-
	C	CR3-001	12/04/2001	N001	3.87			#	-	-
	C	CR4	12/04/2001	N001	3.96			#	-	-
	C	CR5	12/03/2001	N001	4.17			#	-	-
	C	CRA	12/05/2001	N001	4.27			#	-	-
	C	CRC	12/04/2001	N001	3.77			#	-	-
	C	CRD	12/03/2001	N001	4			#	-	-
	C	CRE	12/03/2001	N001	4.19			#	-	-
Thallium	mg/L	CR1	12/03/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR1	12/03/2001	0002	0.0001 U			#	0.0001	-
	mg/L	CR2	12/05/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR2-001	12/05/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR2B	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR2B-001	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR3	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR3-001	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR4	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CR5	12/03/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CRA	12/05/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CRC	12/04/2001	0001	0.0001 U			#	0.0001	-
	mg/L	CRD	12/03/2001	0001	0.0001 U			#	0.0001	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE:		RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE	ID			LAB	DATA	QA		
Thallium	mg/L	CRE	12/03/2001	0001		0.0001	U		#	0.0001	-
Thorium-230	pCi/L	CR1	12/03/2001	0001		1.8	B		#	1.56	-
	pCi/L	CR1	12/03/2001	0002		1.6	U		#	1.56	-
	pCi/L	CR2	12/05/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR2-001	12/05/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR2B	12/04/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR2B-001	12/04/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR3	12/04/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR3-001	12/04/2001	0001		1.6	U		#	1.56	-
	pCi/L	CR4	12/04/2001	0001		1.7	B		#	1.56	-
	pCi/L	CR5	12/03/2001	0001		1.6	B		#	1.56	-
	pCi/L	CRA	12/05/2001	0001		1.6	U		#	1.56	-
	pCi/L	CRC	12/04/2001	0001		1.6	U		#	1.56	-
	pCi/L	CRD	12/03/2001	0001		1.6	U		#	1.56	-
	pCi/L	CRE	12/03/2001	0001		1.6	U		#	1.56	-
Total Dissolved Solids	mg/L	CR1	12/03/2001	0001		870			#	10	-
	mg/L	CR1	12/03/2001	0002		870			#	10	-
	mg/L	CR2	12/05/2001	0001		938			#	10	-
	mg/L	CR2-001	12/05/2001	0001		925			#	10	-
	mg/L	CR2B	12/04/2001	0001		1170			#	10	-
	mg/L	CR2B-001	12/04/2001	0001		918			#	10	-
	mg/L	CR3	12/04/2001	0001		930			#	10	-
	mg/L	CR3-001	12/04/2001	0001		950			#	10	-
	mg/L	CR4	12/04/2001	0001		945			#	10	-
	mg/L	CR5	12/03/2001	0001		935			#	10	-
	mg/L	CRA	12/05/2001	0001		928			#	10	-
	mg/L	CRC	12/04/2001	0001		935			#	10	-
	mg/L	CRD	12/03/2001	0001		920			#	10	-
	mg/L	CRE	12/03/2001	0001		905			#	10	-
Turbidity	NTU	CR1	12/03/2001	N001		13.6			#	-	-
	NTU	CR2	12/05/2001	N001		19.4			#	-	-
	NTU	CR2-001	12/05/2001	N001		21			#	-	-
	NTU	CR2B	12/04/2001	N001		20.1			#	-	-
	NTU	CR2B-001	12/04/2001	N001		17.3			#	-	-
	NTU	CR3	12/04/2001	N001		44.6			#	-	-
	NTU	CR3-001	12/04/2001	N001		22			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE			LAB	DATA	QA		
Turbidity	NTU	CR4	12/04/2001	N001	34.3			#	-	-
	NTU	CR5	12/03/2001	N001	16.6			#	-	-
	NTU	CRA	12/05/2001	N001	17.8			#	-	-
	NTU	CRC	12/04/2001	N001	22.9			#	-	-
	NTU	CRD	12/03/2001	N001	17.9			#	-	-
	NTU	CRE	12/03/2001	N001	14			#	-	-
Uranium	mg/L	CR1	12/03/2001	0001	0.0065			#	0.0001	-
	mg/L	CR1	12/03/2001	0002	0.0067			#	0.0001	-
	mg/L	CR2	12/05/2001	0001	0.0423			#	0.0001	-
	mg/L	CR2-001	12/05/2001	0001	0.0307			#	0.0001	-
	mg/L	CR2B	12/04/2001	0001	0.0886			#	0.0001	-
	mg/L	CR2B-001	12/04/2001	0001	0.0174			#	0.0001	-
	mg/L	CR3	12/04/2001	0001	0.0176			#	0.0001	-
	mg/L	CR3-001	12/04/2001	0001	0.0185			#	0.0001	-
	mg/L	CR4	12/04/2001	0001	0.0122			#	0.0001	-
	mg/L	CR5	12/03/2001	0001	0.010			#	0.0001	-
	mg/L	CRA	12/05/2001	0001	0.082			#	0.0001	-
	mg/L	CRC	12/04/2001	0001	0.0145			#	0.0001	-
	mg/L	CRD	12/03/2001	0001	0.0106			#	0.0001	-
	mg/L	CRE	12/03/2001	0001	0.0083			#	0.0001	-
Vanadium	mg/L	CR1	12/03/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CR1	12/03/2001	0002	0.001 B			#	0.0003	-
	mg/L	CR2	12/05/2001	0001	0.0022 B			#	0.0003	-
	mg/L	CR2-001	12/05/2001	0001	0.0014 B			#	0.0003	-
	mg/L	CR2B	12/04/2001	0001	0.0012 B			#	0.0003	-
	mg/L	CR2B-001	12/04/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CR3	12/04/2001	0001	0.0009 B			#	0.0003	-
	mg/L	CR3-001	12/04/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CR4	12/04/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CR5	12/03/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CRA	12/05/2001	0001	0.0017 B			#	0.0003	-
	mg/L	CRC	12/04/2001	0001	0.0011 B			#	0.0003	-
	mg/L	CRD	12/03/2001	0001	0.0012 B			#	0.0003	-
	mg/L	CRE	12/03/2001	0001	0.0012 B			#	0.0003	-
Velocity	FPS	CR1	12/03/2001	N001	0.72			#	-	-
	FPS	CR2	12/05/2001	N001	0			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION		SAMPLE: ID	RESULT	QUALIFIERS:		DETECTION LIMIT	UN- CERTAINTY
		ID	DATE			LAB	DATA		
Velocity	FPS	CR2-001	12/05/2001	N001			#	-	-
	FPS	CR2B	12/04/2001	N001	0		#	-	-
	FPS	CR2B-001	12/04/2001	N001	0.50		#	-	-
	FPS	CR3	12/04/2001	N001	0		#	-	-
	FPS	CR3-001	12/04/2001	N001	0.45		#	-	-
	FPS	CR4	12/04/2001	N001	0.20		#	-	-
	FPS	CR5	12/03/2001	N001	0.3		#	-	-
	FPS	CRA	12/05/2001	N001			#	-	-
	FPS	CRC	12/04/2001	N001	0.30		#	-	-
	FPS	CRD	12/03/2001	N001	0.26		#	-	-
	FPS	CRE	12/03/2001	N001	0.85		#	-	-
Zinc	mg/L	CR1	12/03/2001	0001	0.0054 U		#	0.0054	-
	mg/L	CR1	12/03/2001	0002	0.0054 U		#	0.0054	-
	mg/L	CR2	12/05/2001	0001	0.007 B		#	0.0054	-
	mg/L	CR2-001	12/05/2001	0001	0.0061 B		#	0.0054	-
	mg/L	CR2B	12/04/2001	0001	0.0057 B		#	0.0054	-
	mg/L	CR2B-001	12/04/2001	0001	0.0084 B		#	0.0054	-
	mg/L	CR3	12/04/2001	0001	0.010 B		#	0.0054	-
	mg/L	CR3-001	12/04/2001	0001	0.0085 B		#	0.0054	-
	mg/L	CR4	12/04/2001	0001	0.0065 B		#	0.0054	-
	mg/L	CR5	12/03/2001	0001	0.0083 B		#	0.0054	-
	mg/L	CRA	12/05/2001	0001	0.0061 B		#	0.0054	-
	mg/L	CRC	12/04/2001	0001	0.0073 B		#	0.0054	-
	mg/L	CRD	12/03/2001	0001	0.0098 B		#	0.0054	-
	mg/L	CRE	12/03/2001	0001	0.0079 B		#	0.0054	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:32 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE ID	RESULT	QUALIFIERS: LAB	DETECTION DATA	UN-LIMIT QA	CERTAINTY
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RECORDS: SELECTED FROM USEE800 WHERE site_code='MOA01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE 'X') OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #12/1/2001# and #12/15/2001#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- | | |
|--|--|
| J Estimated value. | F Low flow sampling method used. |
| G Possible grout contamination, pH > 9. | L Less than 3 bore volumes purged prior to sampling. |
| R Unusable result. | X Location is undefined. |
| U Parameter analyzed for but was not detected. | |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

ANALYTE	SITE CODE	LOCATION CODE	DATE	SAMPLE ID	UNIT	RESULT	LAB QUAL	DATA VAL	VAL QUAL	DETECT LIM	UNCERTAINTY	SAMPLE TYPE
Ammonium	MOA01	0999	12/06/2001	0001	mg/L	0.0116	B			0.0042		E
Ammonium	MOA01	0999	12/04/2001	0001	mg/L	0.0042	U			0.0042		E
Antimony	MOA01	0999	12/06/2001	0001	mg/L	0.0003	U			0.0003		E
Antimony	MOA01	0999	12/04/2001	0001	mg/L	0.0003	U			0.0003		E
Arsenic	MOA01	0999	12/04/2001	0001	mg/L	0.0006	U			0.0006		E
Arsenic	MOA01	0999	12/06/2001	0001	mg/L	0.0006	U			0.0006		E
Barium	MOA01	0999	12/04/2001	0001	mg/L	0.0003	U			0.0003		E
Barium	MOA01	0999	12/06/2001	0001	mg/L	0.0011	BE	UJ		0.0003		E
Cadmium	MOA01	0999	12/04/2001	0001	mg/L	0.0002	U			0.0002		E
Cadmium	MOA01	0999	12/06/2001	0001	mg/L	0.0002	U			0.0002		E
Calcium	MOA01	0999	12/04/2001	0001	mg/L	0.172	B			0.0653		E
Calcium	MOA01	0999	12/06/2001	0001	mg/L	0.149	B			0.0653		E
Chloride	MOA01	0999	12/04/2001	0001	mg/L	0.0374	U			0.0374		E
Chloride	MOA01	0999	12/06/2001	0001	mg/L	0.0374	U			0.0374		E
Chromium	MOA01	0999	12/04/2001	0001	mg/L	0.0008	U			0.0008		E
Chromium	MOA01	0999	12/06/2001	0001	mg/L	0.0008	U			0.0008		E
Copper	MOA01	0999	12/04/2001	0001	mg/L	0.0006	U			0.0006		E
Copper	MOA01	0999	12/06/2001	0001	mg/L	0.0006	UN	J		0.0006		E
Gross Alpha	MOA01	0999	12/04/2001	0001	pCi/L	0.78	U			2.36		1.36 E
Gross Alpha	MOA01	0999	12/06/2001	0001	pCi/L	-0.93	U			2.42		1.22 E
Gross Beta	MOA01	0999	12/04/2001	0001	pCi/L	-1.02	U			3.76		2.08 E
Gross Beta	MOA01	0999	12/06/2001	0001	pCi/L	-0.76	U			3.92		2.23 E
Iron	MOA01	0999	12/04/2001	0001	mg/L	0.0011	B			0.0008		E
Iron	MOA01	0999	12/06/2001	0001	mg/L	0.0015	B			0.0008		E
Lead	MOA01	0999	12/06/2001	0001	mg/L	0.00052	BN	UJ		0.0001		E
Lead	MOA01	0999	12/04/2001	0001	mg/L	0.00041	B	U		0.0001		E
Lead-210	MOA01	0999	12/06/2001	0001	pCi/L	0.45	U			1.14		0.67 E
Lead-210	MOA01	0999	12/04/2001	0001	pCi/L	0.22	U			1.33		0.78 E
Magnesium	MOA01	0999	12/04/2001	0001	mg/L	0.0042	U			0.0042		E
Magnesium	MOA01	0999	12/06/2001	0001	mg/L	0.0214	B	U		0.0042		E
Manganese	MOA01	0999	12/04/2001	0001	mg/L	0.00015	B			0.0001		E
Manganese	MOA01	0999	12/06/2001	0001	mg/L	0.00045	B			0.0001		E
Mercury	MOA01	0999	12/04/2001	0001	mg/L	0.0002	U			0.0002		E
Mercury	MOA01	0999	12/06/2001	0001	mg/L	0.0002	U			0.0002		E
Molybdenum	MOA01	0999	12/04/2001	0001	mg/L	0.0019	U			0.0019		E
Molybdenum	MOA01	0999	12/06/2001	0001	mg/L	0.0019	U			0.0019		E
Nickel	MOA01	0999	12/06/2001	0001	mg/L	0.0006	U			0.0006		E
Nickel	MOA01	0999	12/04/2001	0001	mg/L	0.0006	U			0.0006		E

ANALYTE	SITE CODE	LOCATION CODE	DATE	SAMPLE ID	UNIT	RESULT	LAB. QUAL	DATA VAL	VAL. QUAL	DETECT. LIMIT	UNCERTAINTY	SAMPLE TYPE
Nitrate as NO ₃	MOA01	0999	12/06/2001	0001	mg/L	0.0305	U			0.0305		E
Nitrate as NO ₃	MOA01	0999	12/04/2001	0001	mg/L	0.0305	U			0.0305		E
Polonium-210	MOA01	0999	12/06/2001	0001	pCi/L	0.0429	UB			0.0551	0.033	E
Polonium-210	MOA01	0999	12/04/2001	0001	pCi/L	0.0563	U			0.0903	0.0519	E
Potassium	MOA01	0999	12/04/2001	0001	mg/L	0.0436	B	U		0.0151		E
Potassium	MOA01	0999	12/06/2001	0001	mg/L	0.147		U		0.0151		E
Radium-226	MOA01	0999	12/06/2001	0001	pCi/L	0	U			0.1	0.06	E
Radium-226	MOA01	0999	12/04/2001	0001	pCi/L	0.05	U			0.05	0.03	E
Radium-228	MOA01	0999	12/06/2001	0001	pCi/L	0.37	UB			0.61	0.36	E
Radium-228	MOA01	0999	12/04/2001	0001	pCi/L	-0.19	U			0.52	0.3	E
Selenium	MOA01	0999	12/06/2001	0001	mg/L	0.0003	U			0.0003		E
Selenium	MOA01	0999	12/04/2001	0001	mg/L	0.0003	U			0.0003		E
Silver	MOA01	0999	12/04/2001	0001	mg/L	0.00056	B	U		0.0001		E
Silver	MOA01	0999	12/06/2001	0001	mg/L	0.00065	B	U		0.0001		E
Sodium	MOA01	0999	12/04/2001	0001	mg/L	0.0673	B	U		0.0074		E
Sodium	MOA01	0999	12/06/2001	0001	mg/L	0.987	B	U		0.0074		E
Strontium	MOA01	0999	12/06/2001	0001	mg/L	0.00078	B			0.0001		E
Strontium	MOA01	0999	12/04/2001	0001	mg/L	0.00016	B			0.0001		E
Sulfate	MOA01	0999	12/06/2001	0001	mg/L	0.121	B	U		0.041		E
Sulfate	MOA01	0999	12/04/2001	0001	mg/L	0.122	B	U		0.041		E
Thallium	MOA01	0999	12/06/2001	0001	mg/L	0.0001	UN	J		0.0001		E
Thallium	MOA01	0999	12/04/2001	0001	mg/L	0.0001	U			0.0001		E
Thorium-230	MOA01	0999	12/04/2001	0001	pCi/L	1.6	U			1.56		E
Thorium-230	MOA01	0999	12/06/2001	0001	pCi/L	1.6	U			1.56		E
Total Dissolved Solids	MOA01	0999	12/06/2001	0001	mg/L	10	U			10		E
Total Dissolved Solids	MOA01	0999	12/04/2001	0001	mg/L	10	U			10		E
Uranium	MOA01	0999	12/06/2001	0001	mg/L	0.0001	U			0.0001		E
Uranium	MOA01	0999	12/04/2001	0001	mg/L	0.0001	U			0.0001		E
Vanadium	MOA01	0999	12/06/2001	0001	mg/L	0.0003	U			0.0003		E
Vanadium	MOA01	0999	12/04/2001	0001	mg/L	0.0003	U			0.0003		E
Zinc	MOA01	0999	12/06/2001	0001	mg/L	0.0054	U			0.0054		E
Zinc	MOA01	0999	12/04/2001	0001	mg/L	0.0054	U			0.0054		E

WATER LEVELS

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:25 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
			DATE	TIME			
0401		3969.60	12/12/2001		15.97	3953.63	
0402		3968.63	12/12/2001		15.53	3953.10	
0403		3968.95	12/12/2001		16.12	3952.83	
0404		3968.30	12/12/2001		14.15	3954.15	
0405		3968.47	12/12/2001		14.33	3954.14	
0406		3969.91	12/12/2001		15.50	3954.41	
0407		3969.09	12/12/2001		16.73	3952.36	
0408		3969.17	12/12/2001		15.58	3953.59	
0409		3969.03	12/12/2001		14.90	3954.13	
A-1		4045.46	12/12/2001				
AMM-1	B	3972.02	12/05/2001	15:08	16.22	3955.80	
		3972.02	12/12/2001		16.30	3955.72	
AMM-2		3967.74	12/06/2001	11:42	13.15	3954.59	
		3967.74	12/12/2001		13.08	3954.66	
AMM-3	D	3967.69	12/06/2001	09:09	12.85	3954.84	
		3967.69	12/12/2001		12.60	3955.09	
ATP-1-D		3970.73	12/12/2001		19.80	3950.93	
ATP-1-ID		3970.87	12/12/2001		19.52	3951.35	
ATP-1-IS		3971.00	12/12/2001		20.38	3950.62	
ATP-1-S		3971.14	12/12/2001		19.83	3951.31	
ATP-2-D		3967.05	12/12/2001		14.45	3952.60	
ATP-2-S		3967.04	12/06/2001	10:30	12.02	3955.02	
		3967.04	12/12/2001		11.93	3955.11	
ATP-3		4000.05	12/12/2001		40.20	3959.85	
B-16		4044.01	12/12/2001				D
B-4 (17)		4044.63	12/12/2001				D
EE-2		4056.80	12/12/2001		59.30	3997.50	
EE-3		4058.80	12/12/2001		60.80	3998.00	
MW-1-R		3964.35	12/12/2001		9.33	3955.02	

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:25 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
			DATE	TIME			
MW-2-R		3966.70	12/12/2001		11.83	3954.87	
MW-3		3969.21	12/05/2001	13:50	14.70	3954.51	
		3969.21	12/12/2001		14.50	3954.71	
NE-MILL		3981.45	12/12/2001		26.45	3955.00	
OW-1		3966.94	12/12/2001		11.63	3955.31	
OW-2		3966.85	12/12/2001		10.40	3956.45	
OW-3		3966.20	12/12/2001		10.92	3955.28	
OW-4		3965.50	12/12/2001		10.12	3955.38	
PW-1		3968.58	12/12/2001		53.34	3915.24	
PW-10		4047.70	12/12/2001		-	-	
PW-11		4047.50	12/12/2001		33.80	4013.70	
PW-12		4048.80	12/12/2001		26.58	4022.22	
PW-13		4059.07	12/12/2001		-	-	D
PW-4		4052.60	12/12/2001		32.03	4020.57	
PW-4-OB-A		4051.70	12/12/2001		30.06	4021.64	
PW-4-OB-B		4051.00	12/12/2001		-	-	D
PW-5		4050.10	12/12/2001		-	-	D
PW-6		4049.90	12/12/2001		31.05	4018.85	
PW-7		4054.90	12/12/2001		-	-	D
PW-8		4048.90	12/12/2001		-	-	D
PW-9		4050.80	12/12/2001		-	-	D
SMI-MW01		3968.32	12/12/2001		13.58	3954.74	
SMI-PW01		3968.45	12/12/2001		13.66	3954.79	
SMI-PW02		3967.48	12/12/2001		13.30	3954.18	
SMI-PW03		3975.04	12/12/2001		18.75	3956.29	
SMI-PZ1D2		3968.26	12/12/2001		14.08	3954.18	
SMI-PZ1M		3968.29	12/12/2001		15.53	3952.76	
SMI-PZ1S		3969.13	12/12/2001		14.40	3954.73	
SMI-PZ2D		3967.38	12/12/2001		14.80	3952.58	

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MOA01, MOAB
 REPORT DATE: 3/11/2002 2:25 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
			DATE	TIME			
SMI-PZ2M1		3967.50	12/12/2001		14.35	3953.15	
SMI-PZ2M2		3967.18	12/12/2001		13.90	3953.28	
SMI-PZ3D2		3975.13	12/12/2001		19.16	3955.97	
SMI-PZ3M		3975.23	12/12/2001		18.83	3956.40	
SMI-PZ3S		3975.03	12/12/2001		18.75	3956.28	
TH-25		3990.04	12/12/2001		31.57	3958.47	
TP-01		3969.39	12/06/2001	16:07	14.65	3954.74	
		3969.39	12/12/2001		14.74	3954.65	
TP-02		3975.55	12/06/2001	15:22	20.91	3954.64	
		3975.55	12/12/2001		20.97	3954.58	
TP-07		3965.72	12/06/2001	14:00	12.20	3953.52	
		3965.72	12/12/2001		12.25	3953.47	
TP-08		3966.57	12/06/2001	14:23	12.65	3953.92	
		3966.57	12/12/2001		12.67	3953.90	
TP-09		3967.38	12/06/2001	13:14	12.98	3954.40	
		3967.38	12/12/2001		12.99	3954.39	
TP-11		3967.51	12/12/2001		12.67	3954.84	
TP-17		3961.25	12/12/2001		13.10	3948.14	
TP-18		3960.35	12/12/2001		12.78	3947.57	
TP-20		3967.55	12/12/2001		15.58	3951.97	
UNK1		3966.10	12/12/2001		-	-	D
UNK2		3974.64	12/12/2001		-	-	D
UNKNOWN		-	12/12/2001		-	-	D
UNKNOWN A		-	12/12/2001		13.10	-13.10	

RECORDS: SELECTED FROM USEE700 WHERE site_code='MOA01' AND LOG_DATE between #12/1/2001# and #12/31/2001#

FLOW CODES:

B BACKGROUND

D DOWN GRADIENT

WATER LEVEL FLAGS:

D Dry

**SAMPLING AND ANALYSIS
WORK ORDER
AND TRIP REPORT**

CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: MAC02-16
CONTROL NO.: 3100-T02-0106

November 8, 2001

Project Manager
Department of Energy
Grand Junction Office
2597 B3/4 Road
Grand Junction, CO 81503
ATTN: Don Metzler

SUBJECT: Contract No. DE-AC13-96GJ87335—November 2001 Ground Water Sampling at
Moab, Utah

Dear Mr. Metzler:

Attached are maps and tables specifying the sampling locations and analytes for monitoring at the Moab, Utah, UMTRA site. Water quality data will be collected from monitor wells and near the shore of the Colorado River at this site as part of the routine UMTRA Ground Water sampling that is scheduled to begin the week of December 3, 2001. Additional river samples will be collected at the bottom of the main channel at selected locations.

The following lists show the monitor wells, piezometers, and surface locations that will be sampled during this monitoring event.

Monitor Wells (filtered)

AMM-1	AMM-2	AMM-3	ATP-2-S	MW-3
-------	-------	-------	---------	------

Piezometers (filtered)

TP-01	TP-02	TP-03	TP-07	TP-08	TP-09
-------	-------	-------	-------	-------	-------

Surface Water Locations (filtered)

CR1	CR2	CR3	CR4	CR5
CRA	CRB	CRC	CRD	CRE

QA/QC samples will be collected as directed in the *Sampling and Analysis Plan for the UMTRA Ground Water Project*. Samples collected for alkalinity will be both filtered and unfiltered. Access agreements for the Moab site are in review and expected to be completed by the start of fieldwork. Water level information will be collected from all sampled wells at the Moab site. Monitor well inspections will be conducted and documented to confirm the status of all sampled wells.

NON-RECORD

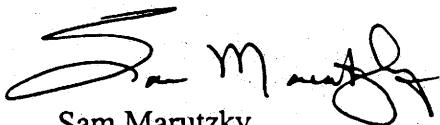
MOA 19.3

2597 B 3/4 ROAD
GRAND JUNCTION, COLORADO 81503
(PHONE) 970/248-6000 (FAX) 970/248-6040

Don Metzler
November 8, 2001
Page 2
Control No.: 3100-T02-0106

If you have any questions, please call me at extension 6059 or Ken Karp at extension 6564.

Sincerely,



Sam Marutzky
Project Manager

SM/lcg/ld
Attachments

cc w/o att: K. Miller
D. Traub
Contract File (J. Dearborn)
cc w/att: C. Bahrke
R. Chessmore
K. Karp *MOA 19.3*
Project Record File MOABATM 7.33 thru T. Smith

**Sampling Frequencies for Locations at
Moab, Utah**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
AMM-1		X				
AMM-2		X				
AMM-3		X				
ATP-2-S		X				
MW-3		X				
Triehometers						
TP-01		X				
TP-02		X				
TP-03		X				
TP-07		X				
TP-08		X				
TP-09		X				
Surface Water Locations						
CR1		X				Sample near shore
CR2		X				In main channel out from CR2
NEW		X				Sample near shore
CR3		X				In main channel out from CR3
NEW		X				
CR4		X				
CR5		X				
CRA		X				Sample near shore
CRB		X				In main channel out from CRB
NEW		X				
CRC		X				
CRD		X				
CRE		X				

Constituent Sampling Breakdown

Site	MOAB	
Analyte	Ground Water	Surface Water
Approx No. Samples/yr	30	10
<i>Field Measurements</i>		
Alkalinity	X	X
Dissolved Oxygen		
Redox Potential	X	X
pH	X	X
Specific Conductance	X	X
Turbidity	X	
Temperature	X	X
<i>Laboratory Measurements</i>		
Aluminum		
Ammonium	X	X
Antimony	X	X
Arsenic	X	X
Barium		
Beryllium		
Bromide		
Cadmium	X	X
Calcium	X	X
Chloride	X	X
Chromium	X	X
Cobalt		
Copper	X	X
Fluoride		
Gamma Spec		
Gross Alpha	X	X
Gross Beta		
Iron	X	X
Lead	X	X
Lead-210	X	X
Magnesium	X	X
Manganese	X	X
Molybdenum	X	X

Site	MOAB	
Analyte	Ground Water	Surface Water
<i>Laboratory Measurements (Continued)</i>		
Nickel		
Nickel-63		
Nitrate	X	X
PCBs		
Phosphate		
Polonium-210	X	X
Potassium	X	X
Radium-226	X	X
Radium-228	X	X
Selenium	X	X
Silica		
Sodium	X	X
Strontium		
Sulfate	X	X
Sulfide		
Thallium	X	X
Thorium-230	X	X
Tin		
Total Dissolved Solids	X	X
Total Organic Carbon		
Uranium	X	X
Uranium-234, -238		
Vanadium	X	X
VOCs		
Zinc	X	X
Total No. of Analytes	29	29

Note. All analyte samples are considered filtered unless stated otherwise. The total number of analytes does not include the field parameters.

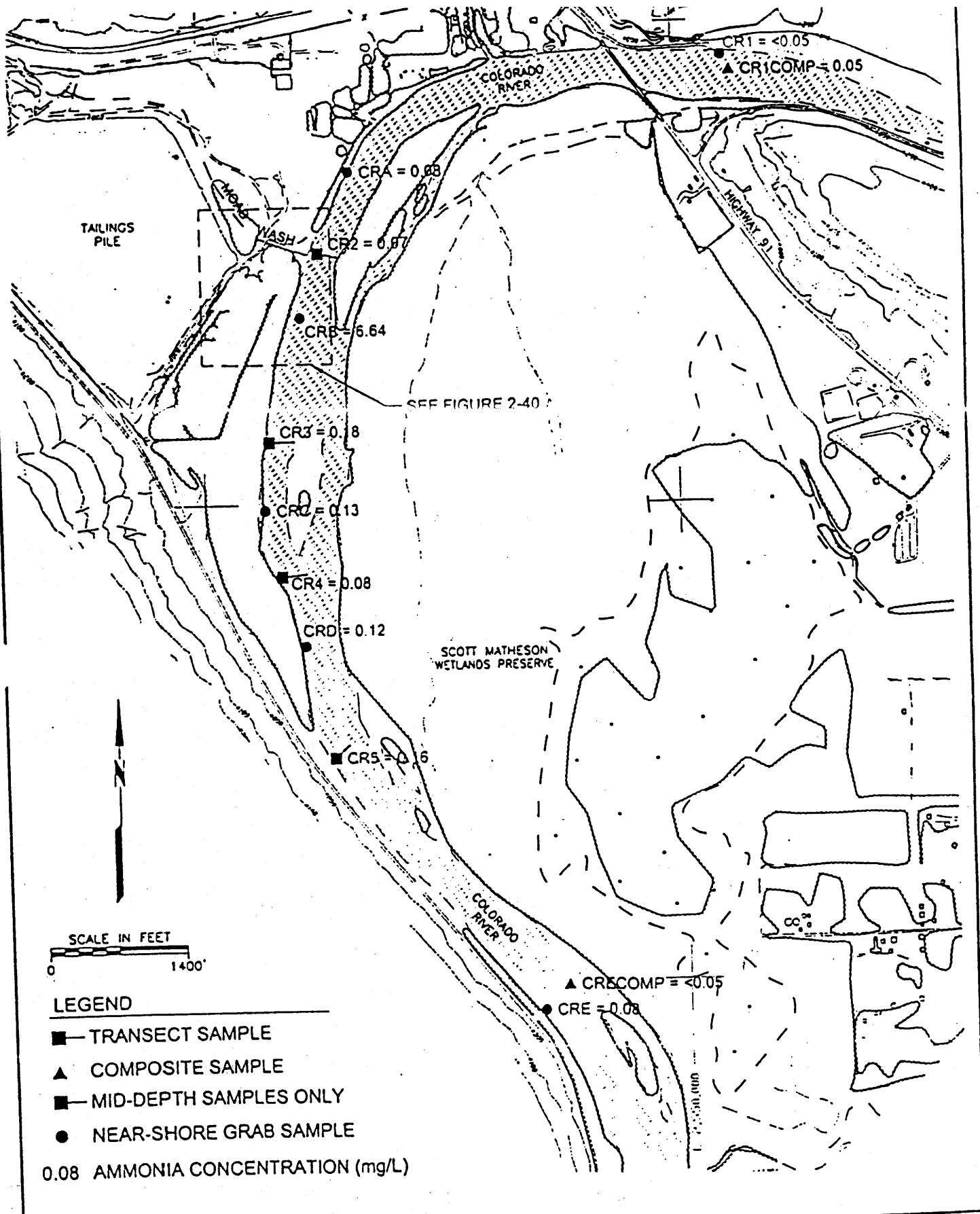


FIGURE 2-39
APRIL 2000 SURFACE WATER
SAMPLING LOCATIONS - AMMONIA

Date:	APRIL 2001
Project:	100554\2000APR
File:	SW-APR-AMM.dwg

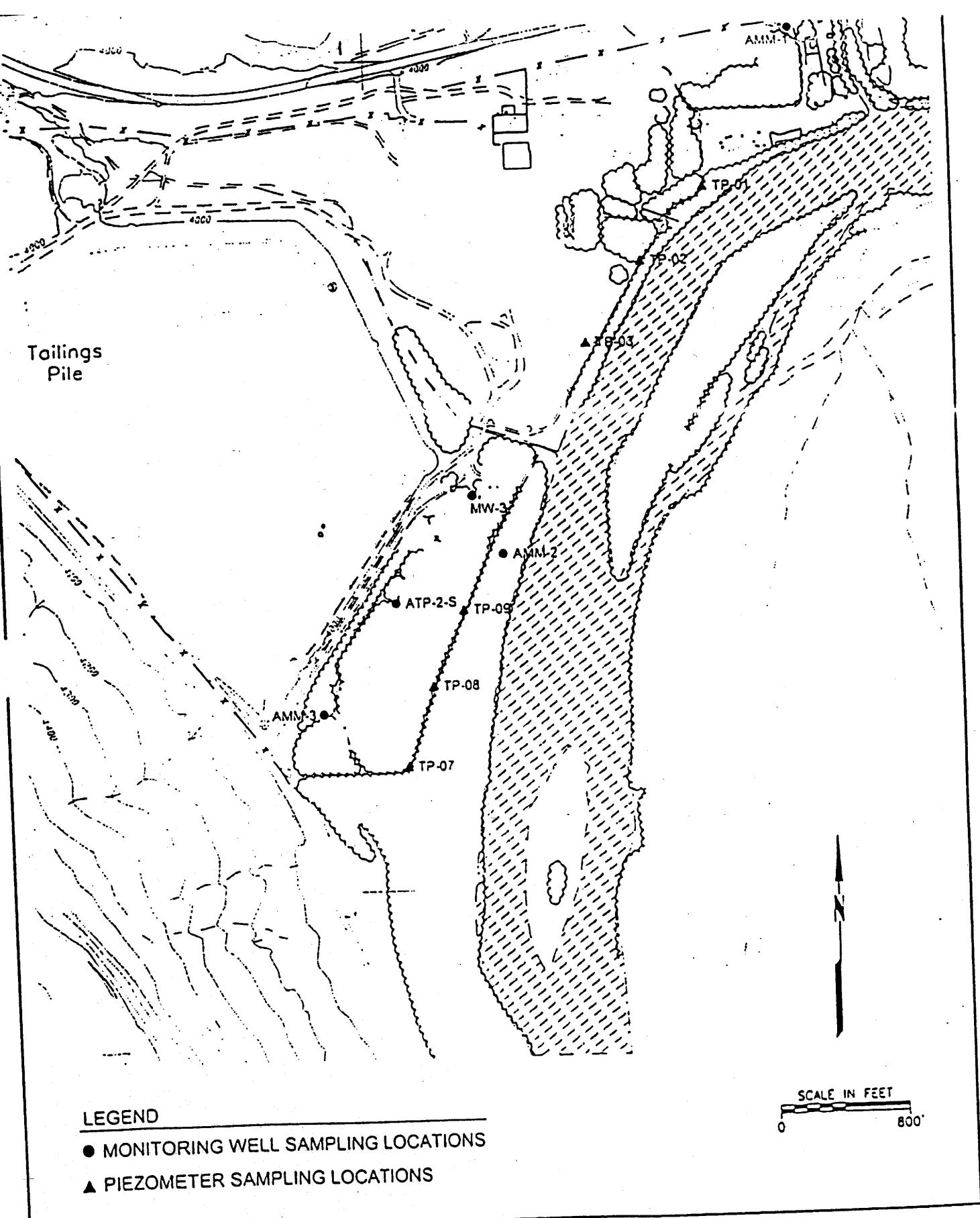


FIGURE 2
GROUNDWATER
SAMPLING LOCATIONS

Date:	APRIL 2000
Project:	100554
File:	GRNDLOC.dwg

MEMO TO: Sam Marutzky
FROM: D. Traub *XCS for*
DATE: January 8, 2002
SUBJECT: Moab Site Water Sampling Trip Report
Site: Moab, Utah

Dates of Sampling Event: December 3 through December 6, 2001

Team Members: Dave Traub and Tom Maveal

Trip Summary: Samples and data were collected from 13 surface and 10 ground water locations at the Moab millsite and adjacent areas. A return trip to the site was made the following Wednesday to collect nitrate/nitrite samples from two wells. These wells were sampled during the original event but these two containers were not preserved. Water levels were measured at all site wells.

Locations Not Sampled/Reason: Piezometer TP-03 was not sampled, as it no longer exists.

Field Variance: None

Requisition Numbers Assigned: 17725

Water Level Measurements: Water level measurements were taken on all sampled wells.

Well Inspection Summary: Well inspections were conducted on all sampled wells. Many of the piezometers are in poor condition and are poorly protected. Several piezometers that were not sampled have had the PVC snapped off at ground level.

Quality Control Sample Cross Reference: The following are the false identifications assigned to the quality control samples:

Sample ID	False Loc.	True Loc.	Sample Type
NDS 152	1000	CR-1	Surface water sample dup.
NDS 157	1001	CR-C	Equipment Blank
NDS 169	1002	AMM-3	Sample dup.
NDS 172	1003	AMM-2	12V pump equipment blank.

NO RECORD

MOA 19.3

Corrective Action: We were forced to cut many tamarisk branches away in order to access the surface water locations along the Colorado River. Much more needs to be cut away in order to safely access these locations in the future.

Equipment: Wells were sampled using the multiple purge volume technique, which has now been superseded by the new micro purge procedure. The micro purge procedure will require dedicated bladder pumps be installed in the deep wells selected for sampling prior to the next sampling event.

Location Specific Information: The following table lists locations, flow rates, and depth of sample for the surface water locations.

Location	Comments
CR-1	Sample collected in 9" of water, flowing, just off edge of concrete boat ramp. 0.72 fps.
CR-E	At stake, 4" deep, 8" from shore. 0.85 fps.
CR-5	At stake, 8" deep, 12" from bank. ~0.3 fps, 0.75 fps two feet further out in the channel.
CR-D	At stake, 8" deep, 2 ft. from bank, very muddy. 0.26 fps.
CR-C	6" deep, 3 ft. from bank, very steep, very muddy. 0.30 fps.
CR-4	~120 ft. SE of stake in flowing current, 2" deep. 0.20 fps.
CR-3	Collected adjacent to bank in 3" of still water. Too slow to turn flow meter prop.
CR3-001	4 ft. from bank in 4" of flowing water. 0.45 fps.
CRB	Collected at edge of gravel bar, 50-60 ft. east of stake. 3" of water, very slow current. Too slow to turn flow meter prop.
CRB-001	6 ft. east of CRB loc., 4" deep, 0.50 fps.
CR2-001	6 ft. from bank, 8" deep. Flowing but couldn't measure rate.
CR2	No flow, 1" deep, 6" from bank
CRA	1 ft. from bank, 4" deep, flowing but couldn't measure rate. Loc sampled was 40 ft. upriver from stake we found in tamarisk on way out.

Regulatory: None.

Site Issues: All work inside the perimeter fence must be done in full PPE and because vehicles are not allowed in the site other than the two mules, work progress was slower than normal. A minimum amount of equipment and supplies were taken into the site, as everything had to be frisked out when leaving. During the spring and summer sampling events it will probably be safer to collect the Colorado River samples from a raft. The steep banks were treacherous enough with snow on them but in the spring there will be a strong current directly below most of the locations. Most of the surface locations are on the outer curve of the river.

Additional Action Required/Taken: None.

Sam Marutzky
January 8, 2002
Page 3
Control No.: 3100-N/A

DT/lcg

Distribution:

cc: C. Bahrke
J. Berwick
K. Karp
D. Metzler
K. Miller
Project Record File MCAXXX thru T. Smith